The Link between Gold Price, Oil Price and Islamic Stock Market: Experience from Malaysia

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Abstract. This research will focus on the relationship between strategic commodities (namely oil and gold prices) and the Islamic stock market in Malaysia. The objective of this research is to analyze the dynamic effects of oil price and gold price changes on the Islamic stock market in Malaysia using an estimation of the Vector Auto Regression (VAR) method. The variables involved in this research are Crude Oil Price (COP), Kijang Gold Price (KGP), and FTSE Bursa Malaysia Emas Shariah Index (FBMES). Using data covering the period from January 2007 to December 2011, the study applies the co-integration analysis, Granger causality test, Impulse Response Function (IRF) and Variance Decomposition (VDC) analysis. The findings show that Islamic stock returns were not co-integrated with strategic commodities in the long run. From the Granger causality viewpoint, it was observed that there was a bi-directional causality relationship between Islamic stock returns with oil prices. On the other hand, the FBMES was not affected by the gold prices or vice versa. Therefore, it can be concluded that, among strategic commodities, only oil’s price variables will affect the Islamic stock return in the short run in Malaysia. This proves that the Kijang Gold Price is not a valid variable for the purpose of predicting changes in Islamic share prices.

Keywords: Islamic Stock Market, Gold Price, Oil Price, Malaysia
1. **Introduction**

The past few years have seen a surge into research pertaining to oil and gold prices, partially due to the recent increase in the prices of these two strategic commodities which play irreplaceable roles in the global economy. Oil, one of the most traded commodities in the world, has observed numerous price fluctuations which have not only been associated with major world development but also as a trigger for economic inflation or recession. For example, oil price hikes in 1974 and 1979 were vital in slowing down the economy while inflation rose. Recent increases in oil prices have also raised concerns over the permanence of the current low inflation world.

Research has been undertaken on evaluating oil price-macroeconomic relationships. These include studies by Hamilton (1983), Burbidge and Harrison (1984) and Gisser and Goodwin (1986) Park and Ratti (2008), Kilian and Park (2009) and Narayan and Narayan (2010), all of which study casual links between macroeconomic variables and oil prices.

Gold, meanwhile, considered a leader in the precious metals market, is an investment asset as well as an industrial commodity. Commonly referred to as a ‘safe haven’ in avoiding high risk in financial markets, gold is often a risk management tool in hedging and diversifying commodity portfolios as it is less susceptible to exchange rate fluctuations. With this in mind, it can be said then that gold is immune to changes in the internal and external purchasing power of domestic currency. Since gold is often thought to adjust quickly to the inflation rate, it thus has a value-preserving ability. On studying gold’s role in the global financial system using a sample period from 1979 to 2009, Baur and McDermott (2010), found that gold was a strong ‘safe haven’ during the peak of the recent financial crisis for most developed markets (eg. Major European and US stock markets), though the same could not be said of small, emerging markets like Malaysia.

Literature regarding the relationship between macroeconomic variables and
gold prices is sparse with the limitation extending to literature on gold price-financial variable relationships. Few formal studies have been conducted on the gold price-stock price relationship. However, owing to the special features and roles of gold and oil, it is practically significant to investigate how these two commodities are able to influence macroeconomic variables in the economy. Owing to the almost non-existent amount of research on the topic, it is therefore expedient to fill this gap. Our paper, thus, examines the dynamic relationships between the prices of oil, gold, and the Islamic stock market, taking Malaysia as a case study to be examined.

The Islamic stock market can be seen as a suitable place for investors in avoiding inflation while also being a suitable economic development indicator for a country (Mohd Hussin and Borhan, 2009). The FTSE Bursa Malaysia Emas Shariah (FBMES), a weighted average index comprised of Main Board companies designated as Shariah-approved securities by the Shariah Advisory Council of the Securities Commission, is therefore relevant in studying the movement of oil and gold price growth in Malaysia.

Evidence of this in the history of the FBMES can be seen from as far back as 2008 in which the movement of the Syariah Index witnessed a decrease of about 43%. The decrease occurred simultaneous to a -61% movement in Malaysia’s crude oil price in 2008. Meanwhile in the same year, gold prices increased about 8.4%. In 2009, however, crude oil prices increased by 99% with the FBMES and gold price witnessing an incredibly positive growth of 43% and 22% respectively. 2010 saw a positive 18.2% growth in the FBMES that was in line with the low positive growth of crude oil and gold prices in that area (11% and 17.5% respectively). In 2011, however, when oil prices recorded a record high of 30% growth, the Islamic stock market grew by only 1.8% while gold prices increased about 12.8% only. These results proved the general correlation between the growth of crude oil and gold prices in relation to the growth of the Islamic stock market in Malaysia. As a result of this, fund managers and investors must consider all economic factors, including that of the crude oil and gold price in
Malaysia which is liable to influence their Islamic stock, before making any investment decisions.

Many studies have also been carried out on the relationship between stock returns and macro variables, though not with gold and oil prices. Regional stock markets, such as that of Malaysia’s, have also been left unexplored due to their small sizes and geographic locations. In this paper, we examined the relationships between the FBM Emas Shariah Index (FBMES) and strategic commodities variables from January 2007 to December 2011 using vector autoregressive (VAR) model.

The rest of the paper is arranged as follows. Section 2 reviews previous relationships between crude oil and gold prices with stock returns. Section 3 provides an overview of the Islamic Stock Market in Malaysia and Section 4 will describe the data used in the research. The econometric methods/methodology and results will be discussed in Sections 5 and 6, respectively. The paper will be concluded in Section 7.

2. Literature Review.

The dynamic relationship that exists between share returns and macroeconomic variables have been extensively discussed, the basis of these studies being the use of models which state that share prices can be appropriately written as the expected discounted cash flow. It can be said, then, that share price determinants are the required rate of return and expected cash flows (Elton and Gruber, 1991). Thus, economic variables such as oil and gold prices, those which impact required returns and future cash flows, can therefore be expected to affect share prices. By using this research, the researchers indicated that there was a foundation for belief in the fact that there existed a stable relationship between stock prices and related macroeconomic variables and strategic commodity variables.

Specifically, the relevant literature generated mixed views on the effects of such oil price shocks on asset prices, stock prices being an example of this. Stock
price and oil price relationships can exist either positively or negatively. Sadorsky (1999) studied the relationship between shocks that occurred in oil prices in the U.S.A and the stock exchange. The results of the study using the data from 1947-1996, one in which the VAR and GARCH analyses were applied and interest rate and industrial production output were included, revealed that oil-price volatility had a negative effect on stock prices. Additionally, Papapetrau (2001) in his study investigated the dynamic relationship between oil price shocks, the stock exchange (stock prices) and economic activities (interest rate and work force) in Greece. His research discovered that oil price shocks negatively impacted the stock, seeing as they negatively affected output and employment growth.

Nandha and Faff (2008) examined how oil prices changes affected equity price and also explored the existence of an asymmetric impact of oil price towards equity returns. Their results suggest that oil prices negatively impacted real output and adversely affected corporate profits where oil was used as an input. However, when the asymmetry of the price effect was tested they found that the effect of oil price change on equity price was symmetric and not asymmetric as expected. O’Neil et al. (2008) and Park and Ratti (2008) showed that oil price shocks statistically and significantly had a negative effect on stock prices for an extended sample of 13 developed markets. This was further expanded by Miller and Ratti’s (2009) investigation on the long term relationship between international crude oil prices and international stock exchanges. According to the study performed within the period 1971-2008 (separated based on periods) and within the scope of the OECD countries and in which the VECM model was used, it was found that there was a long term relationship between variables between periods 1971-1980 and 1988-1999, and that the stock exchange responded negatively to long term increases in oil prices.

On the other hand, Sadorsky (2001), who uses a multifactor market, which takes into account the presence of several risk premiums, identifies factors such as exchange rate and interest rate alongside the actual price of oil itself as the main determinants of oil and gas stock returns. His study also displays a
significantly positive relationship between the price of oil and the stock returns from gas and oil firms. These findings are concurrent with Arouiri and Julien (2009) and Hussin et al. (2012a) who found that the stock market in GCC and Malaysia countries reacted mostly positively to oil and price increases. Lin et al. (2010) and Hussin et al. (2012b) also proved that oil prices showed a positive relationship with stock returns in China and Islamic stock returns in Malaysia based upon the positive expectation effect. Furthermore, the studies of Gogineni (2007), and Yurtsever and Zahor (2007) also helped provide statistical support for a number of hypotheses. For example, one of these was that oil prices were positively associated with stock prices if oil price shocks reflected changes in aggregate demand, but they were negatively associated with stock price if they reflected changes in supply.

The relationship between gold prices and stock prices, however, were inconclusive. Smith’s (2002) research found that the short-run correlation between the gold price and stock price indices were frequently small and negative in European markets and also Japan. The gold prices and stock price indices were also not co-integrated. This meant that there was no long-run equilibrium. These findings agreed with Buyuksalvarci (2010), who discovered that the price of gold had no significant effects on ISE-100 Index returns in Turkey.

Beyond that, another study helped to provide empirical evidence for the relationship between gold prices and stock price indices in the United States. In the study, four gold prices and six stock price indices were used. The short-run correlation between returns on gold and US stock price indices were small and negative, though only for certain series. Granger causality tests found evidence of unidirectional causality from US stock returns to returns on the gold price set in the London morning fixing and the closing price. For the price set in the afternoon fixing, clear evidence of feedback could be found between the markets for gold and US stocks (Smith, 2001). Furthermore, Mishra et al. (2010), in India from January 1991 to December 2009, also proved that the Gold prices Granger-causes stock market returns and that stock market returns also Granger-causes the gold
prices. Thus, it can be said that both the variables contained some significant information for the prediction of one in terms of another. These findings are concurrent with the theory that gold is a safe haven investment.

Meanwhile, Wang et al. (2010) researched the fluctuations in crude oil and gold prices, and the exchange rates of the US dollar vs. various currencies on the stock price indices of the United States, Germany, Japan, Taiwan, and China respectively. Empirical results show that there exist co-integrations among fluctuations in oil price, gold price and the exchange rates of the dollar vs. various currencies, and the stock markets in Germany, Japan, Taiwan, and China. This result indicated the existence of long-term, stable relationships between these variables. There was, however, no co-integration relationship among these variables and the U.S. stock market indices, indicating that there is no long-term stable relationship between the oil price, gold price, and exchange rate, and the US stock market index. A conclusion that can be drawn from these findings is that the relationship between the gold price and stock market varies and depends on a country’s economic situations.

3. Islamic Stock Market in Malaysia

The Islamic stock market can be considered one of the most important branches of the Islamic capital market whereby its components and activities are based on Islamic law, which itself is based upon venerable sources and is approved by the Fiqh Ulama (Mohd Hussin and Muhammad, 2011). The Islamic stock market was established based on 5 main principles of operation: preventing any practice of usury, sharing risks, preventing widespread speculation, compliance of the akad with the stated contract, and the that the activity implemented must be legal in the Syariah aspect (Bacha, 2002).

On April 17, 1999, the Kuala Lumpur Syariah Index (KLSI) was launched by the Kuala Lumpur Stock Exchange, now the Bursa Malaysia. This was the first step in facilitating participation in equity investments compatible with the
Islamic principles of Shariah. The KLSI provided a benchmark for investors seeking to make investments based on Shariah principles and this action helped them to make better informed decisions (Hussin and Borhan, 2009).

The first move in facilitating the development and innovation of Islamic financial products in Malaysia was to establish the Shariah Advisory Council (SAC) at the Security Commission (SC) soon after the SC's own establishment in 1993. This provided the most important first step for the development of the KLSI and other Islamic capital market products and services that have followed. Since then, Malaysia has established itself as a key player in the global Islamic sphere, where the Islamic capital market is specifically recognized as a hallmark of international financial success. Mohd Hussin and Muhammad (2011) reported in 2009 that there were over 88 percent of the total listed Islamic equity companies in Malaysia. In the latest development, Bursa Malaysia, in co-operation with the FTSE, introduced a new series of tradable equity indices called the FTSE-Bursa Malaysia Emas Shariah Index (FBMES) and the FTSE-Bursa Malaysia Hijrah Shariah Index (FBMHS). This development helped to create more opportunities for investors seeking Shariah investments to benchmark their portfolios, and for the asset managers to create new products serving the investment community.

The selection of Shariah-compliant companies takes place through a screening process based on qualitative and quantitative parameters. Therefore, in the qualitative criteria, The SAC has applied a standard criterion in focusing on the activities of the companies listed on the Bursa Malaysia. The companies whose activities are not contrary to the Shariah principles will be classified as Shariah-compliant securities. According to Mohd Hussin and Borhan (2009), companies will be classified as Shariah non-compliant securities if they are involved in the following core activities:

(a) Having their financial services based on *riba* (interest); (b) Gambling and gaming; (c) The manufacture or sale of non-halal products or related products; (d) Conventional insurance; (e) Entertainment activities that are non-permissible
To determine a tolerable level of mixed contributions from permissible and non-permissible activities towards turnover and profit before the taxation of a company, the quantitative parameters are mainly used by the SAC. If the contributions from non-permissible activities exceed the benchmark, the securities of the company will be classified as Shariah non-compliant. According to the Securities Commission (2011), the benchmarks are:

(a) The five-percent benchmark to activities that are clearly prohibited such as *riba* (interest-based companies like conventional banks), gambling, liquor and pork; (b) the 10-percent benchmark to activities that involve the element of “*umum balwa*”, which is a prohibited element affecting most people and is difficult to avoid such as such a contribution is the interest income from fixed deposits in conventional banks; (c) the 20-percent benchmark to assess the level of contribution from mixed rental payments from Shariah non-compliant activities such as the rental payment from the premises that are involved in gambling, the sale of liquor, etc and (d) The 25-percent benchmark to activities that are generally permissible according to Shariah and have an element of *maslahah* to the public, though there are other elements that may affect the Shariah status of these activities such as hotel and resort operations, share trading, stock-broking and others as these activities may also involve other activities that are deemed non-permissible according to the Shariah.

4. Data Description

A total of two strategic commodities variables and FBMES indices have been used in the analysis. The definitions of each variable and the time-series transformation are described in Table 1.

Table.1: Definitions and Transformation of Variables
<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Description</th>
<th>Duration</th>
<th>Time Series Data Transformation Variable</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FBMES</td>
<td>FBMES used as the proxy for Islamic stock market in Malaysia</td>
<td>Monthly data (January 2007 to December 2011)</td>
<td>$\Delta \text{LNFBMES} = \log \left[ \frac{\text{FBMES} \ (t)}{\text{FBMES} \ (t-1)} \right]$</td>
<td>Bloomberg</td>
</tr>
<tr>
<td>2</td>
<td>COP</td>
<td>COP used as the proxy for world crude oil price.</td>
<td>Monthly data (January 2007 to December 2011)</td>
<td>$\Delta \text{LNCOP} = \log \left[ \frac{\text{COP} \ (t)}{\text{COP} \ (t-1)} \right]$</td>
<td>Monthly Statistical Bulletin, Bank Negara Malaysia</td>
</tr>
<tr>
<td>3</td>
<td>KGP</td>
<td>KGP used as the proxy for Malaysia gold price</td>
<td>Monthly data (January 2007 to December 2011)</td>
<td>$\Delta \text{LNKGP} = \log \left[ \frac{\text{KGP} \ (t)}{\text{KGP} \ (t-1)} \right]$</td>
<td>Monthly Statistical Bulletin, Bank Negara Malaysia</td>
</tr>
</tbody>
</table>

5. Methodology

We adopted a vector autoregressive (VAR) model to examine the relationship between oil prices and macroeconomic variables in the Islamic stock market index in Malaysia. The model developed and applied in this study is as follow:

$$ FBMES_t = \alpha_0 + \alpha_1 \text{COP}_t + \alpha_2 \text{KGP}_t + \mu_t $$  (1)
It aims to examine the relationship between Islamic stock market variables, namely the FBM Emas Shariah Index (FBMES), with two commodities variables, which are the Crude Oil Price (COP) and the Kijang Gold Price (KGP) based on the discounted cash flow model (Kearney and Daly (1998). Based on the VAR regression method, the above-mentioned model has three variables and can be written as:

\[
\begin{bmatrix}
FBMES_t \\
COP_t \\
KGP_t \\
\end{bmatrix} = \begin{bmatrix} A_1 \\
A_2 \\
A_3 \\
\end{bmatrix} + \begin{bmatrix} et_1 \\
et_2 \\
et_3 \\
\end{bmatrix} + \begin{bmatrix} FBMES_{t-1} \\
COP_{t-1} \\
KGP_{t-1} \\
\end{bmatrix} R(L)
\]

(2)

Where R is 3 x 3 matrix polynomial parameter estimators, (L) is lag length operators, A is an intercept, and et is a Gaussian error vector with mean zero and Ω is a Varian matrix.

To properly specify the VAR model, we followed the standard procedure of time series analyses. First, we applied the commonly used augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests to determine the variables' stationarity properties or integration order. Briefly stated, a variable is said to be integrated of order d, written 1(d), if it requires differencing d times to achieve stationarity. Thus, the variable is non-stationary if it is integrated of order 1 or higher. Classification of the variables into stationary and non-stationary variables is crucial since standard statistical procedures can handle only stationary series. Moreover, there also exists a possible long-run co-movement, termed cointegration, among non-stationary variables having the same integration order. In this study, the lag length is determined based on the Akaike Information Criterion (AIC) which is commonly used for the VAR model.

Accordingly, in the second step, we implemented a VAR-based approach of the cointegration test suggested by Johansen (1988) and Johansen and Juselius (1990). Appropriately, the test provided us with information on whether the variables, particularly the measures of the Islamic stock market and commodities
variables, were tied together in the long run. If these variables were not cointegrated, the standard Granger causality test would be applied on the first difference of these variables. If these variables were cointegrated, a Granger causality test would be conducted based on a VAR with the introduction of an error correction term following the suggestion of Granger (1988). Granger causality tests were performed to identify the existence and nature of the causality relationship between the variables.

Next, this study conducts the Impulse Response Function (IRF) to ascertain how each variable responds over time to shocks in itself and in other variables by using the innovation technique. The IRF essentially maps out the dynamic response path of a variable to a change in one of the variable’s innovations. Finally, the Variance Decomposition (VDC) is adopted to indicate the degree of exogeneity between variables outside of the sampling period. The VDC shows the percentage of forecast error variance for each variable that may be attributed to its own shocks and to fluctuations in the other variables in the system.

6. Empirical Results

The overall results suggest that the correlation between FBMES and crude oil prices are statistically significant. The significance and high magnitude of the Pearson correlation coefficient shows the close association, and possible co-movement, between these two variables under consideration. The Pearson correlation also provides a very interesting result. First, the relationship between the FBMES and kijang gold price is shown to be very weak and positive. With a correlation coefficient of 0.312, this seems to suggest that the Islamic stock market is not benchmarked against the Kijang gold price in Malaysia. Second, the relationship between crude oil price and Kijang gold price is shown to be positive, has a weak correlation, and is not significant. This is quite puzzling since one would not expect an oil price increase to increase the gold price accordingly. In order to rule out the possibility of spurious correlations, this study then
conducted several standard econometric tests to determine the unit root, cointegration and Granger causality.

Table 2: Results of the Pearson Correlation Coefficient

<table>
<thead>
<tr>
<th></th>
<th>FBMES</th>
<th>COP</th>
<th>KGP</th>
</tr>
</thead>
<tbody>
<tr>
<td>FBMES</td>
<td>1.000</td>
<td>0.727*</td>
<td>0.312</td>
</tr>
<tr>
<td>COP</td>
<td>0.727*</td>
<td>1.000</td>
<td>0.254</td>
</tr>
<tr>
<td>KGP</td>
<td>0.312</td>
<td>0.254</td>
<td>1.000</td>
</tr>
</tbody>
</table>

* Denote significance at 1% respectively

Table 3 presents the results for the unit-root tests using the Phillips-Perron (PP) and Augmented Dickey-Fuller (ADF) tests for the order of integration of each variable. For the level of the series, the null hypothesis of the series having unit roots cannot be rejected at even a 10% level except for the IIR. However, it is soundly rejected for each differenced series. This implies that the variables are integrated of order I(1).

Table 3: Unit Root Test-Summary Statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>Level ADF</th>
<th>Level PP</th>
<th>First Difference ADF</th>
<th>First Difference PP</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNFBMES</td>
<td>-1.591 (1)</td>
<td>-1.636 (4)</td>
<td>-5.500 (0)*</td>
<td>-5.551 (3)*</td>
</tr>
<tr>
<td>LNCOP</td>
<td>-2.501 (1)</td>
<td>-2.096 (3)</td>
<td>-4.827 (0)*</td>
<td>-4.819 (3)*</td>
</tr>
<tr>
<td>LNKGP</td>
<td>-2.883 (5)</td>
<td>-2.991 (3)</td>
<td>-4.960 (3)*</td>
<td>-10.396 (3)*</td>
</tr>
</tbody>
</table>

* Denote significance at 1% respectively

Having established that the variables were stationary and have the same order of integration, we proceeded to test whether they were cointegrated. To
achieve this, the Johansen Multivariate Cointegration test was employed. The results of the Johansen’s Trace and Max Eigenvalue tests are shown in Table 3. At the 5% significance level the Trace and Max Eigenvalue test suggested that the variables were not cointegrated. Therefore, it can be concluded that there is no long-run or equilibrium relationship between gold price, oil price and Islamic stock returns in Malaysia. This result is in line with Smith (2002), Buyuksalvarci (2010) and Wang et al. (2010). Therefore, this finding will open the room for investors to diversify their investment portfolios, which puts the gold market as one of their investments in Malaysia.

Table 4: Johansen-Juselius Cointegration Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Null Hypothesis</th>
<th>Statistical Trace</th>
<th>Critical Value (5%)</th>
<th>Maximunm Eigen Statistic Trance</th>
<th>Critical Value (5%)</th>
<th>Variable</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lag</td>
<td>r ≤ 0</td>
<td>25.666</td>
<td>29.797</td>
<td>19.776</td>
<td>21.131</td>
<td>LNFBME</td>
<td>Statistical Trace showed no cointegratio n vectors</td>
</tr>
<tr>
<td></td>
<td>r ≤ 1</td>
<td>5.890</td>
<td>15.494</td>
<td>5.883</td>
<td>14.264</td>
<td>LNCOP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>r ≤ 2</td>
<td>0.001</td>
<td>3.841</td>
<td>0.001</td>
<td>3.841</td>
<td>LNKGP</td>
<td></td>
</tr>
</tbody>
</table>

*: Denote significance at 5% respectively

*: Critical Value obtained from Osterwald-Lenum (1992)

#: lag length based on Akaike Information Criterion (AIC)
Table 5: Granger Causality Test

<table>
<thead>
<tr>
<th>Null Hypothesis:</th>
<th>F-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNCOP does not Granger Cause LNFBMES</td>
<td>5.531*</td>
<td>0.006</td>
</tr>
<tr>
<td>LNFBMES does not Granger Cause LNCOP</td>
<td>7.226*</td>
<td>0.001</td>
</tr>
<tr>
<td>LNKGP does not Granger Cause LNFBMES</td>
<td>2.122</td>
<td>0.129</td>
</tr>
<tr>
<td>LNFBMES does not Granger Cause LNKGP</td>
<td>0.459</td>
<td>0.633</td>
</tr>
<tr>
<td>LNKGP does not Granger Cause LNCOP</td>
<td>0.724</td>
<td>0.489</td>
</tr>
<tr>
<td>LNCOP does not Granger Cause LNKGP</td>
<td>0.532</td>
<td>0.590</td>
</tr>
</tbody>
</table>

The results of the Granger causality tests show one significant causal relationship. There is a bi-directional, causal relationship between Islamic stock returns and the growth of crude oil prices. This result is supportive of our earlier findings based on the Pearson correlation and is in line with the findings of Arouri and Rault (2011) for Saudi Arabia. The pattern of this short term Granger causal relationship can be summarised as in figure 1.

Figure 1: Analysis on Short Term Granger Causal Relationship
As shown in Figure 2, the Islamic stock return responds negatively and immediately to innovations in the gold price index and is stable lasting for approximately 24 months. More importantly, the IRF results show that Islamic stock returns responded significantly and positively to oil prices for the first 3 months, and then responded negatively after 4 months, lasting for approximately 24 months. This result confirmed the co-movement between the variables and is consistent with the Granger causality results. The result has an important implication in the significant relationship, particularly to the impact of oil prices on Islamic stock returns which indicated the exposure of the Islamic stock market to external macroeconomic variables in Malaysia.

The results of the VDC analysis are presented in Table 6. Similar to IRF, the results are reported for a 24-month horizon. The ordering of the variables for the VDC in this study is based on the Cholesky decomposition method which suggests the following order of the variables: LNKGP, LNCOP and LNFBMES.

According to Table 6, in the case of Islamic stock returns, 41.6 percent of the variations were contributed by other variables. Among all the variations, oil price variables were the most significant variable, explaining about 37.2 percent of the Islamic stock return forecast error variance, while gold price contributed only 4.38 percent. This result is consistent with that of the Granger causality tests. Interestingly, only about 14.1 percent of the variations in gold prices were explained by the Islamic stock return and oil price. This finding suggests that the gold price does not affect changes in Islamic stock return in Malaysia.
Figure 2: Results of Impulse Response Function

Response to Cholesky One S.D. Innovations ± 2 S.E.
Table 6: Results of Variance Decompositions Analysis

<table>
<thead>
<tr>
<th>Variance Decomposition of</th>
<th>Period (Months)</th>
<th>Innovations in</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LNFBMES</td>
<td>LNKGP</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>97.945</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>90.623</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>73.241</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>62.326</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>58.419</td>
</tr>
<tr>
<td>LNKGP</td>
<td>1</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>1.455</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>2.955</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>3.186</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>2.727</td>
</tr>
<tr>
<td>LNCOP</td>
<td>1</td>
<td>0.000</td>
</tr>
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7. Conclusions

The main objective of this study is to investigate the relationship between gold price, oil price and the Islamic stock market in Malaysia. From the analysis above, it can be concluded that the Islamic share prices (FBMES) do not show a significant long run relationship with the crude oil price (COP) and kijang gold price (KGP). This finding proves that both strategic commodities variables are not valid variables for the purpose of predicting changes in Islamic share prices in
Malaysia in the long run. Meanwhile, as a result of Granger causality analysis, it was observed that there was bi-directional causality relationship between the Islamic stock index with oil prices, though the gold price was not the causal of the FBMES index and vice versa. Therefore, it can be concluded that, among strategic commodities, only oil price variables affected the Islamic stock return in the short run in Malaysia. This proved that the Kijang Gold Price is not a valid variable for the purpose of predicting changes in Islamic share prices.

References


Malaysia


