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The Interrelationship of Global Market Indices and Commodities towards Malaysia Stock Market

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Abstract

This research is an attempt to initiate a theoretical interrelationship global market indices and commodities towards KLCI index over the period 2016-2020. The stock market performance can be evaluate using a variety of indicators to identify the present situation of the economy, whether the country is worth investing in or should be avoided, and to indicate the economy's overall health. The dependent variable used in this study is KLCI index while for an independent variables are Dow Jones Industrial Average Index (DJIA), SSE Composite Index (SSE), Hang Seng Index (HIS), crude oil price and gold price. The methodology used for this study focused on descriptive analysis, correlation analysis and multiple regression analysis. The findings of this study shows that most of the independent variables have significant relationship with dependent variable except for Gold Price (GOLD). SSE Composite Index (SSE), Hang Seng Index (HSI), Crude Oil Price (OIL) have a positive relationship with KLCI Index. Dow Jones Industrial Average Index (DJIA) and Gold Price (GOLD) have a negative relationship with KLCI Index. For future studies, the researchers can use an event study method to see the comparison of stock market performance due to Global market indices and commodities.
Keywords: FBMKLCI, Commodities, Global Market Indices, DJIA, Gold Price.

Introduction

The stock market's performance can be evaluate using a variety of indicators to identify the present situation of the economy, whether the country is worth investing in or should be avoided, and to indicate the economy's overall health. The market index is one of the indicators that may be used to determine the stock market's performance. A market index is a hypothetical portfolio representing a segment of a country's financial market as a collection of investment assets in that market (Young, 2019). The relevance of market players, regulators, and academic researchers investigating the level of volatility links across financial markets has expanded due to financial market integration within a fast-developing global financial system. Investors and policymakers are increasingly interested in better understanding the nature of cross-market connections and interactions. As a result, a better understanding of how markets interact is critical in determining price,

hedging, and regulatory policy. As a result, there is a lot of literature on volatility and cross-market correlations (Francis In, 2002).The country's only stock market, with the FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLCI) as its main index, is the FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBMKLCI). Before the Asian financial crisis, according to Corradi et al (2013), the Malaysian stock market was the fifth-largest in Asia in terms of capitalization. Macroeconomic factors can account for about 75% of stock market fluctuation, according to their research. Srinivasan (2011), on the other hand, claims that monetary policy factors have a major long-term impact on the Malaysian stock market.

The majority of research shows that the world's main markets are becoming more interconnected and that commodities trading between them is also rising. According to the widely recognized concept of market integration, if two or more calls are integrated, the identical securities should be priced the same in this market. Even in the United States, the Dow Jones Industrial Average and Asia's SSE Composite and Hang Seng Index have influenced the market in recent years. There is a marked tendency toward a daily link between stock market behaviour in the United States and Asia, with stock price behaviour in ASEAN countries like Malaysia (KLCI) (Majid, 2006).

The significant impact can be seen on KLCI Index when the index dropped 0.97%. This occurred as the announcement of Donald Trump's victory in the 2016 US presidential election spread throughout the world. Following the election results, global financial markets plummeted but soon rebounded. The Dow Jones industrial average, for example, was down 0.30 percent before rising 0.40 percent (Hanim, 2019).

In 2015, China's SSE Composite stock crash have significantly affected the global market including Malaysia. The Shanghai Composite index fell 8.5 percent during the week of August 2015, causing stock markets across Asia, Europe, and the United States to tumble as well. In addition, the KLCI and the ringgit stock market index in Malaysia suffered losses, falling 0.28 percent and 0.05 percent, respectively (Een, 2017)

For crude oil commodities, the relationship between oil and the stock market has been the topic of much research for oil commodities during the last two decades. In this circumstance, preliminary investigations indicated a negative link between oil prices and stock market performance.

As we can see, the issue of market sentiment can be affecting the KLCI index. Market sentiment is defined by Lee et al (1991) as the anticipation of asset returns not supported by economic fundamentals. As Baker and Wurgler (2006) defined, investors' penchant for speculation fuels the demand for speculative investments. The bad sentiment occur in foreign country have affected to the sentiment in local stock market (Yoshinaga & Castro, 2012).

While the Malaysian stock market is doing well, it is susceptible to global events such as Donald Trump's victory in the US presidential election. It damaged the stock markets of many countries due to his manifesto, which may lead to adverse policies and have a detrimental impact on the Malaysian economy. The Dow Jones was down during the election, while the Kuala Lumpur Composite Index (KLCI) had a negative and significant return of 0.9128 per cent. (2019, Karmila Hanim)

The benchmark FTSE Bursa Malaysia KLCI (FBM KLCI) declined 7.28 points, or0.47 per cent, to 1,532.06 on September 24, 2021, from the closing of 1,539.34 on Thursday. Reflecting continuing concerns over China's real estate crackdown has led to fears that the country's real estate behemoth, China Evergrande Group, may fail. The mood is still gloomy, and it looks that this trend will continue in the foreseeable future as negative pressure

reigns supreme (TheStar, 2021). Even though Malaysia is unrelated to Evergrande, the big drop in the SSE Composite index and the Hang Seng index has influenced and affected the plummeting KLCI index. Thus, the KLCI's drop was mostly attributable to negative sentiment.

Currently, gold and oil prices fluctuate daily, and investors believe that stock returns may or may not be influenced. Observing the fluctuations in crude oil prices is critical since they might considerably influence the economy of both oil-exporting and oil-importing countries. For companies that depend on oil and its products, they are unable to provide their products and services at reasonable costs' (Pindyck, 2003). There is a direct correlation between volatile prices and changes in commodities' values in commodity derivatives markets (Narayan and Narayan, 2007). Because Malaysia is the largest exporter of crude oil, lower oil prices will impact the KLCI's energy sector.

Financial markets may be adversely affected by gold price volatility despite its relevance for hedging and currency trading. A rise in gold price volatility causes hazardous investment circumstances, whereas decreased gold price volatility provides safe investment conditions (Baur, 2012). For this reason, it is critical to understand the volatility of the gold price, which can affect derivative valuation, hedging choices, financial markets, and the whole economy (Ewing and Malik, 2013). Investors and producers in the gold sector should be aware of the increased volatility in gold prices, which exposes them to risk. As a conclusion, global market and commodities can give an impact to the stock market. In this study, we want to examine the linkages of the variables towards stock market performance.

Literature Review
Bursa Malaysia KLCI index

The most widely index used to assess the performance of the Malaysian stock market is the Bursa Malaysia KLCI. The value of the KLCI is calculated using the 30 top enterprises affecting Malaysia's economic growth. Stock indices will be evaluated when governments and central banks conduct fiscal or monetary measures to stabilize the economy. The main Kuala Lumpur Composite Index (KLCI), followed by other indices, has been revised as part of Bursa Malaysia's strategic plan to ensure that it remains robust and healthy in evaluating the Malaysian economy in relation to the world economy. Accordingly, the KLCI has been merged with internationally recognized index computation procedures by Bursa Malaysia and its key index partner, the FTSE group, to produce a more investable, marketable, and transparent index (Karim & Bin, 2016). This might explain how the stock markets in the United States (Dow Jones) and Asia (SSE Composite and Hang Seng Index) have influenced this market in recent years. There is a considerable tendency toward a daily link between stock market behavior in the United States and Asia, with stock price behavior in ASEAN countries like Malaysia (KLCI) (Mohd & Abdul 2006). The swings in global sector indexes continue to affect the Malaysian stock market. FBMKLCI has been proven to have a relationship with the DJIA, SSE Composite, and Hong Kong Stock Exchange Composite Index (HKHSI). In terms of the relationship between commodities and the KLCI index, the KLCI Impulse Response Function for each commodity demonstrates that the KLCI varies during periods when the gold and crude oil markets experience shocks. The behavior of the KLCI in response to gold and crude oil price shocks was similar, with a negative first reaction followed by an upswing and a limited influence across the horizon. Short sales of commodities may be to blame for such swings. Investors will be hesitant to participate in the commodities market if the gold and crude oil markets vary because they cannot foresee market circumstances. As a result, they sell short in the commodities market, affecting the KLCI's trading volume.

Dow Jones Industrial Average Index

According to Surz (2018) the US stock market is the most significant creator of information and dominates the worldwide market. As a result, it becomes a pricing leader in the global market. International investors are more likely to react to news from the US market than to communications from other markets. Furthermore, Masih and Masih (1999) say that the US market is ahead of the rest of the world because of its better liquidity, smaller capitalization, and lower transaction costs. The United States is said to be the world's largest stock market. According to recent data, market integration between Asian and American markets is increasing. The study's findings also show that the US market have significant relationship and increasingly driving the Asian market (Azlin et al., 2007). Other researchers also discovered that emerging nations like Malaysia were more financially tied to the US stock market during the financial crisis in the US (Ramdhan et al., 2016). In addition, according to Alzaid (2016), the KLSE index is favorably associated with worldwide stock market results, such as the Dow Jones. These findings are consistent with numerous research that argue about global stock market integration and mostly focus on the influence of American market indexes. Other studies by Phua et al (2017) found that the DJIA Index was significant and negative compared to the KLCI Index in a study of the outcomes of this research. Because the KLCI Index has a significant negative relationship with the DJIA Index, when the DJIA Index drops, the KLCI Index does not fall.

Shanghai SE Composite Index

The Shanghai Stock Exchange Composite Index (SSE) is a stock market index that includes all Shanghai Stock Exchange equities. The stock market in China has demonstrated its worldwide supremacy. During the Asian financial crisis, the subprime crisis, and the bankruptcy of Lehman Brothers, the link between the Malaysian and Chinese stock markets grew stronger, showing that both markets had been hit hard. The Chinese market is currently becoming increasingly significant following the relaxation of capital limits on equity investments (Lean and Smyth, 2014). The movement of stock market indices between Malaysia and China also demonstrates the favorable association between the SSE Composite Index and the KLCI Index. When the stock market in China suffered tremendous volatility, it impacted the Malaysian stock market. For example, on August 24, 2015, the Shanghai Composite index plunged 8.49 per cent due to dismal manufacturing statistics and global fears about the Chinese economy. Likewise, the Kuala Lumpur Composite Index has dropped 2.70 per cent due to a drop in the China stock market. In addition, the China stock market saw a significant sell-off, and trade was halted on January 4, 2016. As a result, the Shanghai Composite Index dropped 6.86%, while the Kuala Lumpur Composite Index dropped 2.31%. Malaysia and China have identical directional movements in their currency rates and stock markets. Thus, the stock market of China and Malaysia assumed to have positive relationship (Arslanalp, Liao, Piao & Seneviratne, 2016). In addition, according to a study by Phua (2017), the Shanghai Stock Exchange Composite Index shows a significant positive relationship with the KLCI Index. As a result, the KLCI Index will react similarly to the SSE Composite Index.

Hang Seng Index

Due to its high liquidity and low transaction costs, the Hong Kong market, represented by the Hang Seng Index, is the leading regional market and a significant information provider in Asia. This might explain why the Hong Kong stock market dominates Bursa Malaysia (Karim et al., 2006). Many studies have been done comparing the KLCI index of the Malaysian stock

market to the Hang Seng index of the Hong Kong stock market. Researchers Samsi et al (2012) used a combination of the Granger causality test, the Johansen cointegration analysis, and a vector error correction model to integrate the Malaysian and Hong Kong Asian markets' stock markets. During the 1997 financial crisis, the Malaysian stock market had a positive relationship with other Asian stock markets, particularly the Hong Kong stock market. Research by Jaffar et al (2014) demonstrate that the Malaysian stock market is significant positive relationship with the Hong Kong stock market. Investors looking to make educated guesses about Bursa Malaysia's share price movement might benefit from looking at these nations. The Hong Kong Stock Exchange impacts the Malaysian stock market (Phua, 2017). However, Thuraisingam et al (2006) observed that the performance of the Bursa Malaysia KLCI Index and the performance of a selected overseas index, the Hang Seng Index, had a low to medium positive connection. Using the data, the researchers concluded that stock markets are interdependent. That Bursa Malaysia's performance is not strongly impacted by global stock markets due to demonstrated by the low to moderate correlation.

Crude Oil Price

Oil price shocks have been demonstrated to have an indirect impact on the stock market through macroeconomic indicators such as inflation and economic growth, according to current research. Oil exporting countries are expected to see an increase in their national revenue due to the rise in oil prices. Increased incomes are expected to fuel a rise in consumer spending and investment, which will lead to a greater level of productivity and more jobless individuals (Filis et al., 2011). As a result, the surge in oil prices sparked a stock market reaction. In the present worldwide market, Malaysia produces and sells 39 per cent of all oil. An earlier study by Razak et al (2009); Kapusuzoglu (2011) found that oil has a significant impact on Malaysia stock market performance. In addition, other studies have found that oil has an impact on oil prices as well. Stock prices appear to be more affected by commodity prices than by macroeconomic issues. According to Razak (2009), the Bursa Malaysia KLCI index was affected by changes in crude oil prices. Long-term trends in oil prices and stock market performance between 1986 and 2006 required the application of cointegration tests and an Error Correction Model (ECM) were studied and discovered a very substantial long-term link between the two. The price of oil is also a significant determinant in driving stock price changes, according to research. From the empirical test conducted by Razak (2009), the study shows that there is a statistically significant long-term relationship between the performance of the KLCI Index and the oil price movement. However, Keong (2014) found a negative correlation between oil and the KLCI index.

Gold Price

Mishra and Mohan (2012) have discovered a correlation between the stock market and the price of gold. The surge in gold prices has been related to the stock market, according to the studies. Gold only demonstrates weak hedging, or diversification characteristic, against the domestic stock market in the best of conditions. This means that, in extreme circumstances, gold moves along with the stock market, producing a single market. Ghazali et al (2008) added, these data imply that gold has a limited influence in emerging countries like Malaysia when the stock market suffers a deep decline. A few studies have found a correlation between gold and the stock market. Gold has a positive link with Malaysia's Kuala Lumpur Composite Index, according to research undertaken by (Gumilang et al., 2014). Ibrahim (2011) agreed, concluding that gold may be a viable alternative to the Malaysian stock market. On

the other hand, Alzaid (2016) observed that the effect of gold price on the KLSE is minimal. Therefore, KLSE market investors do not retain positions in the gold market for hedging or speculating. The coefficient of return of the gold index is negatively significant at the significance level of 5 per cent, which suggests a substantial negative influence on the return of the gold index of the Malaysian stock market. It is obvious that when gold prices decline, the KLCI index demonstrates a positive reaction. These findings show that gold might be a suitable alternative for individual investors to diversify their portfolios to avoid risk. Given that there is a significant correlation between the KLCI and the GI, practitioners must make the required precautions to prevent market crashes merely because of this volatile association (Fria et al., 2020). Another research by Keong (2014) indicated that the association between the gold price and the KLCI stock market is negligible and negative. It demonstrates that gold is not integrated with the stock market index, indicating only a short-term equilibrium.

Methodology
This study interrelationship between the Bursa Malaysia KLCI Index and the Dow Jones Industrial Average, the SSE Composite Index, the Hang Seng Index, the crude oil price, and the gold price. The data used in this study was obtained from the investing.com and trading economics website. Quantitative data is used in this study to answer the research questions since numerical data is included in this investigation. Data were then analyzed using E-views software and then compared to the empirical results, which were then used to arrive at the study's primary conclusion. Because the data in this study was measured across time and multiple Linear Regression is conducted to do regression analysis. Monthly data from 2016 to 202 were used as the study's time frame.

Multiple Linear Regression
Multiple linear regression is using to determine the one dependent variable and more than one independent variables. Thus, the equation of multiple linear regression is shown below:

$$KLCI_i = \beta_0 + \beta_1\, DJIA + \beta_2\, SSE + \beta_3\, HSI + \beta_4\, OIL + \beta_5\, GOLD + \varepsilon \qquad \text{(Eq 1)}$$

Where,
KLCI = KLCI Index
DJIA = Dow Jones Industrial Average (DJIA)
SSE = SSE Composite Index
HSI = Hang Seng Index
OIL = Crude Oil Price (Brent)
GOLD = Gold Price

Results and Discussions
This study is to examine the interrelationship of global market indices and commodities towards Malaysia stock market. The dependent variable for this study is KLCI index while for independent variables are DJIA, SSE, HIS, Oil and Gold.

Descriptive Analysis

Table 1

Descriptive Statistic for Selected Factors affecting Malaysia Stock Market

	KLCI	DJIA	SSE	HSI	OIL	GOLD
Mean	1664.144	23645.27	3038.87	25867.16	55.91383	1452.56
Median	1671.835	24567.53	3027.41	26111.1	55.645	1372.7
Maximum	1870.37	30606.48	3480.83	32887.27	82.72	2017.1
Minimum	1350.89	16466.3	2493.9	19111.93	22.74	1161.9
Std. Dev.	111.8812	3613.853	234.237	3067.358	13.32814	204.105
Skewness	-0.429197	-0.391852	-	-0.139348	-0.180167	1.34804
Kurtosis	3.177943	2.134577	2.46085	2.446476	2.692327	3.8903

Table 1 displays the descriptive statistic for the entire variable used in this study. As shown in the table above, the mean value for KLCI index is1664.1, while for DJIA, SSE, HIS, Oil and Gold have a mean value of 23645, 3038.8, 25867, 55.913 and 1452.5 respectively. The maximum value for KLCI index is 1870 meanwhile the maximum value for DJIA, SSE, HIS, Oil and Gold are 30606, 3480, 32887, 82 and 201. The skewness of KLCI, DJIA, SSE, HSI and OIL is negative suggesting that the probability distribution is negative in value and that the data's probability distribution has a longer tail on the left. Meanwhile, GOLD is the only variable that has positive skewness suggesting that showed a positive probability distribution with a long tail on the right.The KLCI and GOLD is having a kurtosis value greater than 3 meaning that the dataset has heavier tails than a normal distribution (more in the tails). Meanwhile, DJIA, SSE, HSI and OIL have a value less than 3 meaning that the dataset has lighter tails than a normal distribution (less in the tails).

Correlation Analysis

The purpose of correlation research is to determine the relationship between variables. The correlation matrix between the changes of the dependent variable and independent factors in this investigation is shown in Table 2.

Table 2
Correlation analysis for Selected Factors affecting Malaysia Stock Market

Correlation

t-Statistic

Probability	KLCI	DJIA	SSE	HSI	OIL	GOLD
KLCI	1.000000					

DJIA	-0.201681	1.000000				
	-1.568184	-----				
	0.1223	-----				
SSE	0.203320	0.111916	1.000000			
	1.581472	0.857718	-----			
	0.1192	0.3946	-----			
HSI	0.443690	0.648683	0.255639	1.000000		
	3.770498	6.491255	2.013800	-----		
	0.0004	0.0000	0.0487	-----		
OIL	0.623675	0.381499	-	0.735587	1.000000	
	6.076321	3.143124	-	8.269586	-----	
	0.0000	0.0026	0.8563	0.0000	-----	
GOLD	-0.620082	0.607191	0.286909	0.020766	-	1.000000
	-6.019344	5.819896	2.280930	0.158183	-	-----
	0.0000	0.0000	0.0262	0.8749	0.0029	-----

The table above shows there are weak negative relationship for DJIA and KLCI with a value of -0.201681, meaning that there is weak negative relationship between each other. Second, there are weak positive relationship between the SSE and the KLCI with a value of 0.203320. Third, there are moderate positive relationship between the HSI and the KLCI with a value of 0.443690, meaning that there is moderate positive relationship between each other. Next, there are moderate positive relationship between the OIL and the KLCI with the value of 0.623675, meaning that there is moderate positive relationship between each other. Lastly, gold and KLCI index shows a negative relationship with a value of -0.620082, Overall, the independent variables such as SSE, HSI, and OIL have positive relationship with the KLCI while the other two which is DJIA and GOLD have negative relationship with the KLCI. Meanwhile, for level significance, all independent variables have significant relationship with the KLCI except DJIA and SSE.

Multiple Regression Analysis
A regression analysis was performed, and the results are summarized in table 3 and in equation (2) below

Table 3
Multiple Regression Analysis

Variable	Coefficie	Std. Error	t-Statistic	Prob.
C	1270.48	118.5419	10.71761	0.000
DJIA	-	0.005968	-3.194299	0.002
SSE	0.10210	0.041078	2.485717	0.016
HSI	0.01506	0.005247	2.870861	0.005
OIL	4.31393	1.233016	3.498684	0.000
GOLD	-	0.097047	-0.686118	0.495

R-	0.74674	Mean dependent		1664.1
Adjusted R-squared	0.72329	S.D. dependent var		111.88
S.E. of regression	58.8523	Akaike info		11.082
Sum squared resid	187034.	Schwarz criterion		11.292
Log likelihood	-	Hannan-Quinn		11.164
F-	31.8449	Durbin-Watson		0.7126
Prob(F-statistic)	0.000000			

The table above show the effect of global indices and commodities towards KLCI index. As a result, the finding of regression analysis can be transformed into an econometric equation as follows:

KLCI = 1270.48531742 - 0.0190650519705*DJIA + 0.102108470091*SSE + +0.0150643903922*HSI + 4. *OIL - 0.0665858221432*GOLD   (Eq2)

All the independent variable were significant when the p-value is less that 5% significant level except for Gold when the p-value is more than 5% significant level. The coefficient for DJIA is - 0.019065, meanwhile for gold, the value is – 0.066586. A negative value indicates a negative relationship with Malaysia stock market. This value indicates increase in DJIA by 1%, KLCI index will decrease by 0.019065 assuming other variable constant. On the other hand, the coefficient for SSE, HSI and Oil indicate a positive relationship. This value indicates change in SSE, HSI and Oil by 1%, KLCI index also will change by 0.102108, 0.015064 and 4.313933 assuming other variable constant. The F-test for this study is 31.84499 with the P-value of 0.0000 with 5% significant level. Therefore, it indicates the overall model is fit. In addition, the coefficient of determination (R2) is 0.746746. It shows that 74.6746% of the total variation in the Malaysia stock market can be explain by the total variation in independent variables while another 25.3254 can be explain by other factors.

Conclusion

This study contributes to investigate the linkages between global markets and commodities towards Malaysia stock market. The dependent variable in this study is KLCI Index while the independent variables are Dow Jones Industrial Average Index, SSE Composite Index, Hang Seng Index, crude oil price and gold price. The overall finding revealed that most of the variables are significant except for Gold. DJIA had a significant and negative relationship with KLCI Index. This result is supported with previous finding by (Chen, 2017; Alzaid, 2016; Wen, 2017). For SSE, HSI and Oil had a positive and significant relationship. This result supported with previous finding by (Arslanalp et al., 2016; Huei, 2017; Tarmizi et al., 2010; Abdul Razak, 2009; Abdul Hadi et al., 2009; Kapusuzoglu, 2011). Based on the result from this study, it shows that all independent variables are significant to the dependent variable which Bursa Malaysia KLCI Index (KLCI) except Gold Price (GOLD). SSE Composite Index (SSE), Hang Seng Index (HSI), Crude Oil Price (OIL) have a positive relationship with KLCI Index while Dow Jones Industrial Average Index (DJIA) and Gold Price (GOLD) have a negative relationship with KLCI Index. Thus, our objectives for this study are met except gold price because it has insignificant relationship towards KLCI Index. Our result from this study has proved that global market indices and commodities has adversely impact towards the performance of Malaysian stock market.

Recommendation

Future studies should focus on the Malaysian stock market and widen their reach to include other nations. In addition, the relationship between the Malaysian market sector and certain global indexes also needs to be studied in depth. For example, there are lack of research on Malaysia technology index and Nasdaq who said by many people that there are some correlate between each other. Researchers are encouraged to run their data through different statistical programs rather than relying solely on E-Views results, which is the primary software used in this study. The purpose is to verify the correctness and consistency of the results and enhance the model's performance. They also need to do more research on the relationship between gold and KLCI index. This is because there is a lack of research on this matter and there are also differences of opinion from past researchers.

References

Alzaid, S. (2016). The Kuala Lumpur Stock Exchange Composite Index (KLSE CI) And Economic Forces. *SouthEast Asia Journal of Contemporary Business, Economics and Law*. https://doi.org/https://seajbel.com/wp- content/uploads/2016/10/K10_2.pdf

Azlin, A. B., Hazila, N. I., & Syamsul, S. (2007). International Price Relationship Between Malaysian Stock Exchange composite Index with Dow Jones Industrial Average, Han Seng Index and Nikkei 225 Average Index. Institut Penyelidikan, Pembangunan dan Pengkomersilan, Universiti Teknologi MARA, Selangor.

Ibrahim, M. H. (2011). Financial market risk and gold investment in an emerging market: the case of Malaysia. *International Journal of Islamic and Middle Eastern Finance and Management, 5,* 25-34.

Filis, G., Floros, C., & Degiannakis, S. (2011). Dynamic correlation between stock market and oil prices: The case of oil-importing and oil-exporting countries. *International Review of Financial Analysis, 20,* 152-164. 10.1016/j.irfa.2011.02.014.

Ghazali, M. F., & Lean, H. H. (2013). Is Gold a Hedge or a Safe Haven? An Empirical Evidence of Gold and Stocks in Malaysia. *International Journal of Business and Society. 14*. 428-443.

Gumilang, R. C., Hidayat, R. R., NP, M. G. W. E. (2014), "Pengaruh Variabel Makro Ekonomi, Harga Emas dan Harga Minyak Dunia Terhadap Indeks Harga Saham Gabungan (Studi Pada Bursa Efek Indonesia Periode 2009-2013)", *Jurnal Administrasi Bisnis, (14)* 2.

Karim, A., & Bin, M. N. (2016). Bursa Malaysia index series revision effects on market microstructure.

Kapusuzoglu, A. (2011). Relationships between Oil Price and Stock Market: An Empirical Analysis from Istanbul Stock Exchange (ISE*). International Journal of Economics and Finance, (3)*6 DOI:10.5539/ijef.v3n6p99

Karim, Abd., Mohd, Z., & Gee, C. S. (2006). Stock Market Integration between Malaysia, and its Major Trading Partners (1994-2002) (August 23, 2008). *Applied Econometrics and International Development, (*6) 3. Available at SSRN: https://ssrn.com/abstract=1249083

Le, T. H., & Chang, Y. (2011). The impact of oil price fluctuations on stock markets in developed and emerging economies. Nanyang Technological University, School of Humanities and Social Sciences, Economic Growth Centre Working Paper   No. 2011/03.

Jaffar, M. M., Juhari, E. A., Zaki, A., & Tarmizi, A. K. A. (2014). Comparative Analysis of FBMKLCI with Major World Indices by Using Stochastic Calculus. Conference. International Conference on Global Optimization and Its Application 2014, Yokyakarta, Indonesia.

Lean, H. H., & S, R. (2014). Stock Market Co-movement in ASEAN and China. Emerging Markets and the Global Economy. (Elsevier pp.603-622). DOI (10.1016/B978-0-12-411549-1.00025-9)

Masih, A., & Masih, R. (1999) Are Asian Market Fluctuations Due Mainly to Intra-Regional Contagion Effects? Evidence Based on Asian Emerging Stock Markets. *Pacific-Basin Finance Journal, 7*, 251-282. http://dx.doi.org/10.1016/S0927-538X(99)00013-X

Mishra, R., and Mohan, G. (2012). *Gold Prices and financial Stability in India*. Reserve Working Paper series, Department of Economic and Policy Research.

Mohd, Y. R., & Abdul, M. M. (2006). Who Moves the Malaysian Stock Market— the U.S. or Japan? Empirical Evidence from the Pre-, During, and Post-1997 Asian Financial Crisis. *Gadjah Mada International Journal of Business, 8*(3), 367-406. doi: http://dx.doi.org/10.22146/gamaijb.5616

Ramdhan, N., Yousop, N. L. M., Ahmad, Z., Abdullah, N. M. H., & Zabizi, A. Z. (2016). Malaysia Stock Market Integration: The Effect of Leader and Emerging Market. *Journal of Advanced Research in Business and Management Studies*.

Thuraisingam, P., Tew, T. C. Y. H., & Daud, D. (2006). Inter-relationship between performance of Bursa Malaysia and foreign stock markets. *Social and Management Research Journal, 3*(1), 113.
https://doi.org/10.24191/smrj.v3i1.5107

Phua, C. Y., Ang, W. H., Chua, H. E., Hong, Y. W., & Peng, S. C. (2017). *Does Domestic Stock Market Returns Depends on the Stock Market of its Major Trading Partners? Evidence from Malaysia.* Thesis. Faculty of Business and Finance, University Tunku Abdul Rahman.

Razak, A., Hadi, A., Yahya, M. H., & Nor, Abu. (2009). The Effect of Oil Price Fluctuations on the Malaysian and Indonesian Stock Markets. *Journal of Business and Accounting, 2*(1&2) .

Samsi, S. M., Yusof, Z. B., & Cheong, K. C. (2012). Linkages Between the Real Sector and the Financial Sector: The Case of Malaysia. *Asian Academy of Management Journal of Accounting and Finance, 8*(93-113).

Surz, R. (2018). *U.S. Stock Market Is Biggest & Most Expensive in World, But U.S. Economy Is Not the Most Productive*. NASDAQ.
https://www.nasdaq.com/articles/us-stock-market-biggest-most-expensive-world-us-economy-not-most-productive-2018-04-02

Thuraisingam, T., Tew, Y., & Daud, D. (2006). Inter-relationship between performance of Bursa Malaysia and foreign stock markets. *Social and Management Research Journal, 3*(113). Doi 10.24191/smrj.v3i1.5107