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ANALYZING THE DYNAMICS OF ISLAMIC STOCK MARKET INDICES IN SEVERAL MUSLIM COUNTRIES

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ABSTRACT

Purpose: Analyzing stock price is very necessary to identify the overall price of the stock index, which the market players have various options and references to invest their money in the profitable securities portfolio. Based on the reason, the aim of this study is to examine the Islamic stock price movement in several Muslim countries joined in the Islamic Conference Organization (IOC).

Theoretical Framework: This study refers to the theoretical framework that the integrated capital market can help everyone in analyzing the quality and quantity of the Islamic stock price movement, including its challenges and opportunity in the context of investment risk management.

Design/Methodology/Approach: This research uses a descriptive-analytical method and comparative approach to examine the tends of Islamic stock price movement in six Muslim countries from the period January 2010 to December 2019, namely JII-Indonesia, DJIMY-Malaysia, DJTR-Turkey, DJIMKW-Kuwait, TDWL-Saudi Arabia, and QEAR-Qatar, which are analyzed quantitatively, statistically, and deductively.

Findings: The results of the research show that the co-integrated of Islamic Stock Index are JII-Indonesia with DJIMY-Malaysia, JII-Indonesia and DJIMKW-Kuwait, DJIMY-Malaysia with DJIMKW-Kuwait, DJTR-Turkey with DJIMKW-Kuwait, QEAR-Qatar with DJIMKW-Kuwait. The Islamic stock index pairs confirmed through the VAR and VECM tests are only DJIMY-Malaysia with QEAR-Qatar, DJIMY-Malaysia with DJIMKW-Kuwait, and TDWL-Saudi Arabia with QEAR-Qatar.

Research, Practical & Social Implications: This study becomes one example of the practical analysis of Islamic Stock Market movements that can be used to the stock market players in taking the consideration and decision for the investment in capital market.

Originality/Value: This result of this study is originally limited in the Islamic stock index in six Muslim countries such as Indonesia, Malaysia, Turkey, Saudi Arabia, Qatar, and Kuwait. However, this can be explored more comprehensively in the same or various research objective by the other researchers.

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ANALISANDO A DINÂMICA DOS ÍNDICES DO MERCADO ISLÂMICO DE AÇÕES EM PAÍSES MUÇULMANOS

RESUMO

Objetivo: Analisar o preço das ações é muito necessário para identificar o preço geral do índice de ações, no qual os participantes do mercado têm várias opções e referências para investir seu dinheiro na carteira de títulos

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rentável. Com base no motivo, o objetivo deste estudo é examinar o movimento do preço das ações islâmicas em vários países muçulmanos que aderiram à Organização da Conferência Islâmica (COI).
Referencial Teórico: Este estudo refere-se ao referencial teórico de que o mercado de capitais integrado pode ajudar a todos na análise da qualidade e quantidade do movimento do preço das ações islâmicas, incluindo seus desafios e oportunidades no contexto da gestão de risco de investimento.
Desenho/Metodologia/Abordagem: Esta pesquisa usa um método descritivo-analítico e uma abordagem comparativa para examinar as tendências do movimento islâmico dos preços das ações em seis países muçulmanos no período de janeiro de 2010 a dezembro de 2019, ou seja, JII-Indonésia, DJIMY-Malásia, DJTR- Turquia, DJIMKW-Kuwait, TDWL-Arábia Saudita e QEAR-Qatar, que são analisados quantitativa, estatística e dedutivamente.
Resultados: Os resultados da pesquisa mostram que os co-integrados do Índice de Ações Islâmicas são JII-Indonésia com DJIMY-Malásia, JII-Indonésia e DJIMKW-Kuwait, DJIMY-Malásia com DJIMKW-Kuwait, DJTR-Turquia com DJIMKW-Kuwait, QEAR-Qatar com DJIMKW-Kuwait. Os pares de índices de ações islâmicos confirmados pelos testes VAR e VECM são apenas DJIMY-Malásia com QEAR-Qatar, DJIMY-Malásia com DJIMKW-Kuwait e TDWL-Arábia Saudita com QEAR-Qatar.
Pesquisa, Implicações Práticas e Sociais: Este estudo se torna um exemplo da análise prática dos movimentos do mercado de ações islâmico que pode ser usado para os participantes do mercado de ações na consideração e decisão de investimento no mercado de capitais.
Originalidade/valor: Este resultado deste estudo é originalmente limitado no índice de ações islâmico em seis países muçulmanos, como Indonésia, Malásia, Turquia, Arábia Saudita, Catar e Kuwait. No entanto, isso pode ser explorado de forma mais abrangente no mesmo ou em vários objetivos de pesquisa por outros pesquisadores.

Palavras-chave: Análise, Dinâmica, Islâmico, Estoque, Mercado, Índices, Lucros.

ANÁLISIS DE LA DINÁMICA DE LOS ÍNDICES BURSÁTILES ISLÁMICOS EN LOS PAÍSES MUSULMANES

RESUMEN
Propósito: Analizar el precio de las acciones es muy necesario para identificar el precio general del índice bursátil, que los actores del mercado tienen varias opciones y referencias para invertir su dinero en la cartera de valores rentables. Basado en la razón, el objetivo de este estudio es examinar el movimiento del precio de las acciones islámicas en varios países musulmanes que se unieron a la Organización de la Conferencia Islámica (IOC).
Marco Teórico: Este estudio se refiere al marco teórico en el que el mercado de capitales integrado puede ayudar a todos a analizar la calidad y la cantidad del movimiento del precio de las acciones islámicas, incluidos sus desafíos y oportunidades en el contexto de la gestión del riesgo de inversión.
Diseño/Metodología/Enfoque: Esta investigación utiliza un método descriptivo-analítico y un enfoque comparativo para examinar las tendencias del movimiento del precio de las acciones islámicas en seis países musulmanes desde el período de enero de 2010 a diciembre de 2019, a saber, JII-Indonesia, DJIMY-Malasia, DJTR- Turquía, DJIMKW-Kuwait, TDWL-Arabia Saudita y QEAR-Qatar, que se analizan cuantitativa, estadística y deductivamente.
Hallazgos: Los resultados de la investigación muestran que los cointegrados del Índice de Acciones Islámicas son JII-Indonesia con DJIMY-Malasia, JII-Indonesia y DJIMKW-Kuwait, DJIMY-Malasia con DJIMKW-Kuwait, DJTR-Turquía con DJIMKW-Kuwait, QEAR-Qatar con DJIMKW-Kuwait. Los pares de índices bursátiles islámicos confirmados a través de las pruebas VAR y VECM son solo DJIMY-Malasia con QEAR-Qatar, DJIMY-Malasia con DJIMKW-Kuwait y TDWL-Arabia Saudita con QEAR-Qatar.
Implicaciones de Investigación, Prácticas y Sociales: Este estudio se convierte en un ejemplo del análisis práctico de los movimientos del mercado de valores islámico que puede ser utilizado por los actores del mercado de valores al tomar la consideración y la decisión de invertir en el mercado de capitales.
Originalidad/Valor: Este resultado de este estudio está originalmente limitado en el índice bursátil islámico en seis países musulmanes como Indonesia, Malasia, Turquía, Arabia Saudita, Qatar y Kuwait. Sin embargo, esto puede ser explorado más exhaustivamente en el mismo o varios objetivos de investigación por otros investigadores.

Palabras clave: Análisis, Dinámica, Islámico, Existencias, Mercado, Índices, Ganancias.

INTRODUCTION

The Islamic Conference Organization (ICO) is very well known as the second largest interstate organization after the United Nations. The Islamic economy is growing rapidly in these countries (Ceylan & Dogan, 2004; Ergun & Hassan, 2009). Financial liberalization resulted in capital market integration and the direction of development of the stock market is towards global integration. Stock markets around the world are increasingly open as information and economic policies of countries become more open. Economic globalization is fueling movements in stock markets around the world. Under perfectly integrated international financial market conditions, the value and risk characteristics are also the same when also traded to all markets and investors (Froot & Debora, 1999; Kearney & Lucey, 2004). Financial integration including the capital market is a multidimensional process. The correlation of returns across countries increases due to increased synchronization among financial markets (Bley, 2009; Park, 2013). Market integration in the context of building a country's economy requires harmonization and alliances with other countries. Shared understanding between countries on economic and financial policies to reduce distortion of capital market financial information. Integration can meet the funding needs of companies from cross-border capital market investors. Financial liberalization strengthens the occurrence of international financial transmission (Ben Rejeb & Boughrara, 2015; Carabias, 2018).

Capital market integration has advantages and disadvantages. On the one hand, the integration of benefits is to provide greater opportunities to realize higher economic growth because with the integration of the financial system between countries, foreign capital will be more free to enter. Countries that invest in other countries get a return on investment. integration promotes financial market efficiency, increases transaction volume, reduces information asymmetry. The flow of information and the quality of information is improved because it allows investors to evaluate investments remotely more carefully and quickly. An increase in market size and an increase in the availability of goods and services can lower the cost of trade, increasing efficiency leading to greater purchasing power and of course increases global economic growt (Yu et al., 2010; Albulescu & Pepin, 2018; Selvarajan & Ab-Rahim, 2020). On the other hand, market integration also has a negative impact, namely triggering the risk of financial contagion and financial instability, although the magnitude of the impact depends on the immunity of each country (Albulescu & Pepin, 2018; Selvarajan & Ab-Rahim, 2020).

Financial integration including the capital market is a multidimensional process (Park, 2013). The popular issue of integration or movement of capital markets has been extensively

examined in financial studies (Almshabbak & Chouaibi, 2023). For example, Kasa (1992) shows that the equity market index prices of all five major industrial countries cointegrated. Goetzmann et al., (2005) find correlation variations over time during the period of economic and financial integration of the late 19th and 20th centuries. Guesmi & Nguyen (2011) tested the integration of capital markets in developing countries. The results show that the level of integration varies over time. Guesmi (2013) investigates the stock market integration within the Middle East region, The results prove that capital markets in Middle Eastern countries are highly integrated regionally. There has been a strong and continuous integration of the US capital market into global markets in the last 20 years (Rana & Phillips, 2016). The variation in the level of integration is determined by the volatility of the inflation rate and the exchange rate. Alotaibia and Mishra (2017) examined the market integration of the stock markets of the member countries of the Gulf Cooperation Council. The results showed that international trade, progress in financial markets, developments in oil prices had a significant positive effect on the stock market integration index. In addition, the global financial crisis had a negative impact on the integration index (Hoong, Ling, Hassan & Abdullah, 2023).

However, the results of several previous studies indicate that the traditional view of capital market comovement is not yet complete (Barberis et al., 2005). Assidenou (2011) prove that there is an understanding that an integrated financial market will cause volatility, disruption to economic or financial exposure of other countries. Kollias et al., (2013) show that in the situation of global financial market integration, events such as terrorism events, information about these events creates a great potential for shock and will have a strong potential to transmit negative effects that are transmitted across countries and across markets. Goodman, et al., (2018) prove that the option market is not fully integrated in the global information that underlies option pricing. Padungsaksawasdi et al., (2019 as well as Baghaee, Etemadi & Sepasi (2023). show that international phenomena are not proven to always apply in certain countries or have an impact on other stock markets. Wu (2020) and Flayyih & Khiari (2022) show that stock market integration in East and Southeast Asia is not as strong as expected, despite the government's promotion of financial market collaboration and integration. The interconnectedness of financial markets is due more to the influence of global markets than to individual markets. The results of research by Selvarajan & Ab-Rahim (2020) show that there is no significant relationship between financial integration and financial growth in the Asian region after the 1998 economic crisis.

The research results of Chebab, et al., (2020) provide evidence that in Eastern, Central and North African countries, the development of the financial sector, such as the capital market, does not have a positive correlation with economic growth. In the long term, the U-shaped association is inverted between financial sector development and economic growth. Ibrahim Ahmed Onour (2009) tested using non-parametric tests. The result, shows that there is strong evidence of bivariate and multivariate nonlinear cointegration between the five stock markets of the GCC member countries. Bivariate non-linear relationship between the Kuwait stock market and the respective Saudi Arabian markets, the Saudi Arabian stock market and several other GCC member countries. However, economic integration in ASEAN member countries has not gone smoothly as expected (Shi & Yao, 2020).

Likewise in Central and South Asian countries, the results of research by Hesary et al., (2020) show that financial integration among members of the Central Asian and South Asian co-operation has not materialized due to obstacles, lack of infrastructure support, resulting in barriers to entry. investment from abroad. Financial transparency between participating all countries through official government mechanisms is an important prerequisite for realizing financial integration. Financial information, whether presented by the government or public media, plays an important role in the international stock market, although the magnitude of the impact varies from country to country (Chen, et al., 2020).

Moreover, the first Islamic financial institution was officially formed in 1963 in Egypt. Furthermore, Islamic finance has developed increasingly into an adaptive system of international business practices including the capital market. The first Islamic capital market index was the Dow Jones Islamic Market Index (DJIM) which was first launched on February 9, 1999 in Bahrain (Moran, 1999). Therefore, the capital markets of countries in the Asian region have experienced an increase in their level of capital market integration in the recent period (Wu, 2020), The Islamic Stock Index is an indicator of the activity of the capital market (Kassim, 2013).

Research regarding the direction of stock price movements in the Islamic stock market is still inconclusive. Hafner and Herwartz (2006) 's recently developed causality-in-variance test provides evidence of risk transfer between these apparently disparate equity markets, suggesting contagion between them over the full and sub-period samples. This market volatility structure is dominated by short-term volatility in the first period and by high long-term volatility in the second period (Diem, 2023). The analysis of the volatility impulse response shows a similar volatility transmission pattern despite being various characterized by a more volatile

and short-lived structure in the second period. It appears that Islamic equity markets have also responded to shocks from risk factors rather than from oil prices and US economic policy uncertainty indices during both periods. Dewandaru et al., (2014) show that the joint movement of cross-country stock markets is an indicator of the integration of the Islamic stock market. Bouoiyour et al. (2018) prove that advanced and emerging Islamic stock markets have varying levels of efficiency from time to time. Islamic stock market is not efficient in the short term. developing Islamic stock markets are less efficient than advanced Islamic markets. advanced Islamic stock markets are more persistent.

Therefore, according to Yusup, Sobana & Yulandri (2022), this object has several scientific contributions to be studied in business learnings. First, the research provides additional empirical evidence testing the direction of changes in stock prices listed on several leading Islamic stock indexes. Second, the study examines the movement of the short-term and long-term Islamic stock indexes to see the level of sensitivity for each period. third, this study tests the number of Islamic stock markets in more countries and geographical locations that are spread out, not just one region, so that it more accurately describes the transmission mechanism of international capital market integration. Islamic stock indexes are those used in countries that are committed to developing Islamic capital markets. namely Indonesia (Jakarta Islamic Index), Malaysia (Dow Jones Islamic Market Malaysia Titans 25), Turkey (Dow Jones Islamic Market Turkey), Saudi Arabia (Tadawul All Share Index), Qatar (QE Al-Rayan Islamic Index Qatar), and Kuwait (Dow Jones Islamic Market Kuwait).

LITERATURE REVIEW

The Concep of Stock Investment in Islamic Finance

Religion is the key to human culture (Kumar et al., 2011). Islamic finance is different in philosophy, which is reflected in the Sharia Stock Index. Islamic capital market has unique characteristics in terms of sharia compliance, It is a benchmark for fund owners in choosing sharia-compliant investment products (Moran, 1999). The process of screening the shares of members of the Islamic stock index is based on strict Sharia prohibitions and rules on both qualitative and quantitative aspects to assess adherence to Islamic principles (El Khamlichi et al., 2014). Stock prices may display a high degree of coherence depending correlation of country productivity shocks (Kasa, 1992).

Stock market integration can be explained using the Efficient Market Hypothesis (EMH). Fama et al, 1969) argues that the characteristic of an efficient financial market is the

ability to speed up the curve of adjustment in the presence of new information. served on the market. Financial globalization has initiated the simultaneous movement of financial markets between countries and between regions and transnational in asset allocation. The characteristic of financial globalization is the internationalization of the stock market in each country. Capital market integration is part of economic integration. The Economic Integration Agreement aims to improve the viability of export relations even though the effect differs between types of products (Kearney & Lucey, 2004; Türkcan & Saygılı, 2018) . International or regional economic integration should aim to provide benefits to all participating countries. The requirements are a complete cooperation mechanism and an effective and uniform business environment, the provision of adequate financial infrastructure without trade barriers (Hesary et al., 2020).

The characteristic of an integrated capital market is indicated by the high correlation between stock returns between the stock exchanges of the cooperative member countries. This is done through industrial convergence and economic policies with deregulation, opening of markets and financial systems between participating countries (Brooks & Negro, 2002; Click & Plummer (2003). Financial integration of the capital market is characterized by the existence of a unidirectional movement of share prices between stock exchanges in all member countries of the cooperation agreement (Al Maani, Issa, Alghananim & Aljada, 2023). In this context, the capital market integration agreement between countries is based on economic factors so that financial conditions in the world in general will systematically affect all capital markets. Local investors in Asian capital markets are unable to avoid the influence of foreign capital markets even though some stock markets in local Asian countries are still not fully open to foreign investors (Assidenou, 2011). Information on events in a country will transmit quickly and have implications for changes in the international market structure as well in turn, there are changes in stock prices and fundamentals, especially shares of multinational companies, either positive or negative information (Smajlbegovic, 2018)

In a fully integrated global financial condition, allowing for the consolidation of segmented portfolio risk, the volatility of domestic consumption decreases, each domestic asset will be valued relative to the level of return on the international market (Emiris, 2002; David Hillier & Tiago Loncan, 2019. A portfolio of regional or international economic activity is related to risk factors and the amount of risk can affect asset prices.Financial integration can ultimately lead to lower equity costs (Hillier and Loncan, 2019, Acharya & Pedersen, 2005; Smajlbegovic, 2018). Wang & Guo (2020) Co-movement is a change in the attributes of

financial assets such as prices and other financial assets because of the similarities between these financial assets The scope of co-movement includes co-movement between assets or between different sectors in the same market, between the same or different markets in the country a the same, or between the same or different markets in the same (regional) region and the same market at the international level. International accounting standards and capital markets have an influence on the quality of the consolidated financial statements that are prepared than those that apply domestically (Bartov et al., 2005). Currently, it is possible to have the practice of buying and selling world capital market data so that regulations are needed on the sale of market data so that the quality of the capital market can increase (Easley et al., 2016).

The financial integration are related to economic risks due to differences in the specific characteristics of each country. Financial integration is imperfect and can cause volatility in the economy. Integration is burdensome for developing countries that do not have good governance, unstable financial conditions, fluctuations in capital flows, insufficient corporate liquidity and are prone to economic crises. Inflationary pressures are too high, monetary expansion and exchange rate appreciation due to large and fast capital inflows can have a negative impact on the stability of small and developing economies (Selvarajan & Ab-Rahim, 2020). Between countries, the quality and quantity of information available vary, the level of asymmetric information will be reflected in the bid-ask spread of stock prices (Elbadry, et al, 2015).

The success of capital market integration is also influenced by the characteristics and success of corporate governance in facing global competition. The more companies that succeed in preparing and implementing good governance, the more they will succeed in growing positively, which in the end, many foreign investors are willing to invest in these companies (Smajlbegovic, 2018).

Islamic Stock Investment for Short-Term Interests

Integration makes stock markets between countries become synchronous, price adjustments is getting shorter (Agurto, Rodriguez, Delgado, Santa Cruz, Ramírez & Gavidia, 2023). Youcef & Adewale (2017) proves the existence of integration and two-way relations in the stock markets of Indonesia, Malaysia, Saudi Arabia and Turkey in the aftermath of the crisis. The calculation of the potential profit on the international portfolio is calculated with a relatively short payback period (Kasa, 1992; Thalassinos & Thalassinos, 2006).

Moreover, Hillier & Loncan (2019) found that stock market integration has a positive impact on encouraging companies to have the best governance. Stock market integration generates benefits to the domestic economy even though the magnitude is not evenly distributed across firms. Stock market integration reduces expected return, reduces systematic risk and lowers the cost of capital. Kollias et al, (2013) proves that there is a level of integration which is shown by the effect of changing market volatility between the three largest stock markets in the European Union, namely London, Frankfurt and Paris at the time of the London Bombing on July 7, 2005. Based on previous explanations and research, the hypothesis can be formulated that H1 (There is a short term comovement between Islamic stock indices).

Islamic Stock Investment for Long-Term Interests

Rehman & Shah (2016) proves the existence of a long-term integrated relationship between the Indian and Pakistani stock markets. Many factors play an important role in the conditions of stock market integration, namely the strength of economic ties, coordination of economic policies, deregulation of the stock market and financial liberalization, the financial crisis, the strength of the contagion effect (Agurto, Rodriguez, Delgado, Santa Cruz, Ramírez & Gavidia, 2023). Stock market integration will increase market efficiency. Stock markets in countries with open financial regimes show more stable and consistent long-term demand volatility than countries with closed financial regimes (Albulescu & Pepin, 2018)

The results of the study (Gourene, 2019) reveal that the integration of stock exchanges in African countries tends to grow over time, even though it is still on a small scale, the transmission of financial information from one market to another country's stock market is still slow. Realizing large-scale capital market integration requires policies that encourage faster information transmission and more effective promotion of the stock market. Nepal, et al., 2019) show evidence that there is a cointegration of long-term and stable money demand functions in the economies of the South Asian regional countries. Based on previous explanations and research, the hypothesis can be formulated that H2 (There is a short term comovement between Islamic stock indices).

METHOD

The Research Method

The research uses descriptive-analytical method and is a quantitative approach (Tian, 2023). The data used in this study are closing price data for the monthly Islamic stock index for

the period January 2010 to December 2019. Monthly data obtained through the website www.investing.com. This data uses monthly data in order to obtain adequate data and have strong testing power as was done by (Kasa, 1992). Data is also limited until 2019 to get clean data on the impact of the Corona Virus Disease, the infected victim was first identified on March 2, 2020.

Population and Sample

The population and sample on the Islamic stock indices that are sampled are Islamic stock indices originating from six member countries joined in the Islamic Conference Organization, namely Jakarta Islamic Index (JII) Indonesia, Dow Jones Islamic Market Malaysia Titans 25 (DJIMY); Dow Jones Turkey Islamic Market (DJTR); Dow Jones Islamic Market Kuwait (DJIMKW), Tadawul Saudi Arabia (TDWL) and QE AL Rayan Islamic Index (QEAR). These Islamic stock indices were selected as a sample of Islamic stock market indices because the companies included in the selection applied Sharia Compliance criteria and joined the Islamic Conference Organization (IOC) and the availability of data over the period of 2010–2019.

Operational Variables

The Islamic stock index used in this study is calculated using the same formula, namely:

a. Jakarta Islamic Index (JII) Indonesia. It is a stock index that calculates the average price index of 30 stocks that meet the criteria of sharia, which are traded on the Indonesia Stock Exchange each period.

b. Dow Jones Islamic Market (DJIM). It is the first index that applies sharia investment principles. DJIM was further developed in each country to become the Dow Jones Islamic Market Malaysia Titans 25 (DJIMY); Dow Jones Islamic Market Turkey (DJTR); Dow Jones Islamic Market Kuwait (DJIMKW)

c. Tadawul (TDWL). It is the only stock exchange in Saudi Arabia which was established on March 19, 2007. This exchange is supervised by the Capital Market Authority.

d. QE AL Rayan Islamic Index (QEAR). It was launched on January 7, 2003 by the Qatar Exchange and the Al Rayan Investment Islamic Index is a total return index that reflects price performance and dividend share returns that comply with sharia

(approved by the Al rayan Sharia Supervisory Board) listed on the Qatar stock exchange.

The Type of the Data Analysis

Types of investment that are not included in the calculation of the sharia market index are alcohol, tobacco, pork products and their derivatives, conventional financial businesses, weapons and the like, entertainment (gambling, music, cinema, hotels, and the like), and or having business activities in one a subsidiary or a sub-group of the industry.

Hypothesis Testing Methods

According to (Simkins, 1995; Click & Plummer, 2005, Breitung and Pesaran, 2008; El Khamlichi, 2014), in the time series data test it is necessary to carry out the Stationary Data Test, then the Unit Root Test, Augmented Dickey Fuller (ADF) and Philips Perron (PP) are used to test whether the data is stationary or not. because the data used is time series data so that the resulting regression test data is not biased. Data is considered stationary if the absolute value of the ADF statistic is greater than the critical value of the MacKinnon statistical distribution. When the time series data is not stationary, a differentiation process is carried out so that the data becomes stationary. In addition, the Optimal Lag Test to show the reaction time of one variable to other variables and free it from the effect of autocorrelation.

Granger Test is conducted to determine the causality relationship, when the probability value <alpha, then there is a causality movement. The Johansen test is a test to determine the presence or absence of cointegration based on trace statistical values. The equation is cointegrated when trace statistic value>critical value. When equations are cointegrated, VECM estimates are used, and when equations are not cointegrated, VAR estimates are used.

Vector Autoregressive (VAR) and Vector Error Correction Model (VECM), , VAR is used to explain the relationship between variables with several equations that are dynamic and influence each other . In general, the VAR (p) model can be written as follows.

$$y_t = A_o + A_1 y_{t-1} + A_2 y_{t-2} \ldots + A_p y_{t-p} + \mu_t \quad (1)$$

In this study using VAR (1), so that the form of the equation is as follows.

$$y_t = A_o + A_1 y_{t-1} + \mu_t \quad (2)$$

Explanation:

y_t = a vector with n variables in the study
A_o = intercept
μ_t = error vector

According to Jörg Breitung & Pesar (2005), when the data is not stationary but co-integrated, the VECM approach can be used because VECM is a restricted VAR and allows short and long term causality between variables. The VECM model can be written as follows.

$$\Delta Y_t = A_o + \Gamma_1 \Delta Y_{t-1} + \Gamma_2 \Delta Y_{t-2} + \Pi Y_{t-1} + v_t \quad \text{.....(3)}$$

ΔY_t = the vector contains the variables in the study
A_o = intercept
Γ_1 = regression coefficient matrix
Π = a matrix containing the long-run cointegration equation
Y_{t-1} = variable at level
v_t = error vector

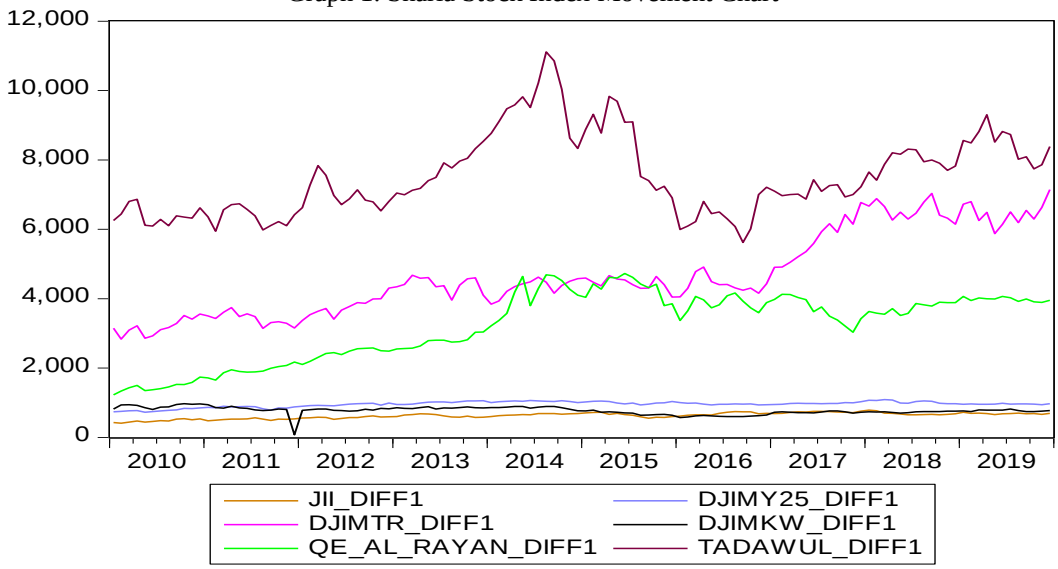
VAR/VECM Model Stability Test to determine whether the model is stationary or not. The model is stationary or valid when the modulus value< 1. Impulse Response Function (IRF) aims to trace the evolution of the tested variable during a certain period after a shock at a certain moment. Forecast Error Decomposition Variance (FEDV) Test. FEDV analysis aims to predict the percentage of variance of each variable due to changes in certain variables in the VAR system (Hillier and Loncan, 2019).

RESULT AND DISCUSSION

The Results of Descriptive Statistic Analysis

Descriptive Statistics Descriptive statistical calculations with the help of Eviews 9 software are presented in the table below.

Graph 1: Sharia Stock Index Movement Chart



Source: Formatted data processing results from Eviews, 2020

Unit Root Test Stationary Test

Table 1. Augmented Dickey-Fuller and Phillips-Perron Test

	Level		*1st difference*	
	ADF	PP	ADF	PP
JII	-3.031451	-3.062656	-10.95506	-11.42351
DJIMTR	-2.878614	-2.861790	-12.49692	-14.65870
DJIMY	-2.510733	-2.278847	-11.60409	-13.11994
QEAR	-1.789321	-1.789321	-1163407	-11.73223
TDWL	-2.128670	-2.165586	-96.96276	-96.25070
DJIMKW	-3.977095	-6.503816	-98.31193	-37.76333
Test Critical Value	-3.448.021		-3.448.348	

Source: Formatted data processing results from Eviews, 2020

Based on the results of the unit root test in Table 1 using the Augmented Dickey Fuller and Philips Pheron methods, it is known that the data is not stationary at the level, because the ADF test statistic<critical point at the 5% real level. However, the data is stationary at difference 1, because the ADF test statistic is> the critical point at the real level of 5%.

Determination of Optimal Lag

Table 2. Determination of Optimal Lag

Lag	AIC	SIC
1		73.21*
14	69.27*	
	VAR (1)	VAR(14)
Adj.R-squared	0.915383	0.910964

Source: The results of data processing formatted from Eviews, 2020

Based on the AIC and SIC criteria, two lag candidates were produced, namely 1 and 14 indicating that the VAR system with lag 1 gave a higher Adj.R-squared, with a value of 0.915383 compared to lag 14, namely 0.910964.

Table 3. Output VAR (1) between JII, DJIMY, DJTR, TDWL and QEAR

Variable	JII	DJIMY	DJIMTR	TDWL	QEAR	DJIMKW
JII	0.83728	0.03568	0.62259	1.15704	0.56412	0.19310
DJIMY	0.03708	0.89721	-0.22646	1.03813	0.27797	-0.06343
DJIMTR	0.00228	0.000052	0.96671	0.010407	-0.00986	0.000807
TDWL	-0.00442	-0.00006	-0.01760	0.94286	0.06318	0.05618
QEAR	0.00764	0.000015	0.00122	-0.17175	0.85552	-0.08956
DJIMKW	-0.00583	0.00604	-0.11875	-0.08474	-0.29921	0.22844
C	7.17962	7.34721	2.33349	-7.05874	-3.31230	3.986784

Source: Formatted data processing results from Eviews, 2020

Based on Table III, the VAR equation (1) for the relationship between JII Indonesia, DJIMY Malaysia, DJTR Turkey, TDWL Saudi Arabia and QEAR Qatar is as follows.

$$\Delta JII = 7.17962+0.83728\Delta JII_{t-1}+0.03708\Delta DJIMY_{t-1}+0.00228\Delta DJTR_{t-1}+0.00442\Delta TDWLl_{t-1}+0.00764\Delta QEAR_{t-1}-0.00583\Delta DJIMKWl_{t-1} \quad (4)$$

$$\Delta DJIMY = 7.34721+0.03568\Delta JII_{t-1}+0.89721\Delta DJIMY_{t-1}+0.000052\Delta DJTR_{t-1}-0.00006\Delta TDWL_{t-1}+0.000015\Delta QEAR_{t-1}+0.00604\Delta DJIMKWl_{t-1} \quad (5)$$

$$\Delta DJTR = -0.11875+0.62259\Delta JII_{t-1}-0.22646\Delta DJIMY_{t-1}+0.96671\Delta DJTR_{t-1}-0.01760\Delta TDWLl_{t-1}+0.00122\Delta QEAR_{t-1}-0.11875\Delta DJIMKWl_{t-1} \quad (6)$$

$$\Delta TDWL = -7.05874+1.15704\Delta JII_{t-1}+1.03813\Delta DJIMY_{t-1}+0.010407\Delta DJTR_{t-1}-0.94286\Delta TDWL_{t-1}-0.17175\Delta QEAR_{t-1}-0.08474\Delta DJIMKWl_{t-1} \quad (7)$$

$$\Delta QEAR = -3.31230+0.56412\Delta JII_{t-1}+0.27797\Delta DJIMY_{t-1}-0.00986\Delta DJTR_{t-1}+0.06318\Delta TDWLl_{t-1}+0.85552\Delta QEAR_{t-1}-0.29921\Delta DJIMKWl_{t-1} \quad (8)$$

$$\Delta DJIMKW=3.986784+0.19310\Delta JII_{t-1}-0.06343\Delta DJIMY_{t-1}+0.000807\Delta DJTR_{t-1}+0.05618\Delta TDWL_{t-1}-0.08956\Delta QEAR_{t-1}+0.22844\Delta DJIMKWl_{t-1} \quad (9)$$

Granger Causality Test

Table 4. Granger Causality Output

Null Hypothesis	*Prob.*
DJIMY does not Granger Cause JII	0.5721
JII does not Granger Cause DJIMY	0.4184
DJTR does not Granger Cause JII	0.5251
JII does not Granger Cause DJTR	0.2632

TDWLdoes not Granger Cause JII	0.5645
JII does not Granger Cause TDWL	0.2166
QEARdoes not Granger Cause JII	0.2099
JII does not Granger Cause QEAR	0.2586
DJIMKWdoes not Granger Cause JII	0.1704
JII does not Granger Cause DJIMKW	0.0441*
DJTR does not Granger Cause DJIMY	0.6145
DJIMY does not Granger Cause DJTR	0.8985
TDWL does not Granger Cause DJIMY	0.9807
DJIMY does not Granger Cause TDWL	0.1075
QEAR does not Granger Cause DJIMY	0.6995
DJIMY does not Granger Cause QEAR	0.0476*
DJIMKW does not Granger Cause DJIMY	0.9978
DJIMY does not Granger Cause DJIMKW	0.2437
TDWL does not Granger Cause DJTR	0.3349
DJTRdoes not Granger Cause TDWL	0.2938
QEAR does not Granger Cause DJTR	0.7086
DJTR does not Granger Cause QEAR	0.667
DJIMKW does not Granger Cause DJTR	0.2308
DJTR does not Granger Cause DJIMKW	0.1954
QEAR does not Granger Cause TDWL	0.7669
TDWL does not Granger Cause QEAR	0.0384*
DJIMKW does not Granger Cause TDWL	0.889
TDWL does not Granger Cause DJIMKW	0.5281
DJIMKW does not Granger Cause QEAR	0.7619
QEAR does not Granger Cause DJIMKW	0.0068*

Source: Formatted data processing results from Eviews, 2020

Based on the test results in table 4 it proves that the four pairs of Islamic stock indexes that have a probability value<alpha (0.05), which means that they have a causal relationship, namely JII (Indonesia) with DJIMKW Kuwait (0.0441), DJIMY Malaysia with QE AL RAYAN Qatar (0.0476), TADAWUL Saudi Arabia with QE AL RAYAN (0.0384), DJIMKW Kuwait with QE AL RAYAN Qatar (0.0068). Meanwhile, the other pairs of the country's Islamic stock index have a probability> alpha (0.05), which means that there is no causality relationship.

Johansen Cointegration Test

Table 5. Johansen Cointegration Test Output

Variable	Uji T*race*		
JII and DJIMY	None	0.044*	2 cointegration
	At most 1	0.012*	
JII and DJTR	None	0.284	no cointegration
	At most 1	0.615	
JII and TDWL	None	0.219	no cointegration
	At most 1	0.36	
JII and QEAR	None	0.425	no cointegration
	At most 1	0.704	
JII and DJIMKW	None	0.014*	1 cointegration
	At most 1	0.085	

DJIMY and DJTR	None	0.836	no cointegration
	At most 1	0.731	
DJIMY and TDWL	None	0.115	no cointegration
	At most 1	0.591	
DJIMY and QEAR	None	0.177	no cointegration
	At most 1	0.908	
DJIMY and DJIMKW	None	0.026*	1 cointegration
	At most 1	0.077	
DJTR and TDWL	None	0.625	no cointegration
	At most 1	0.611	
DJTR and QEAR	None	0.379	no cointegration
	At most 1	0.806	
DJTR and DJIMKW	None	0.027*	1 cointegration
	At most 1	0.451	
TDWL and QEAR	None	0.165	no cointegration
	At most 1	0.397	
TDWL and DJIMKW	None	0.071	no cointegration
	At most 1	0.505	
QEAR and DJIMKW	None	0.015*	1 cointegration
	At most 1	0.282	

Source: Formatted data processing results from Eviews, 2020

Based on the Johansen Test results in table V which has cointegration with the Trace Test value<0.05, it is known that there are 5 Islamic stock index pairs, namely: JII Indonesia and DJIMY Malaysia with 2 cointegration (0.044 and 0.012) which means having, having short-term and long-term relationships. long. JII Indonesia and DJIMKW Kuwait have 1 cointegration with a value of (0.014) which means they have a short-term relationship. DJIMY Malaysia and DJIMKW Kuwait occur 1 cointegration with a value of (0.026) which means they have a short-term relationship, DJTR Turkey and DJIMKW Kuwait occur 1 cointegration with a value of (0.027) which means they have a short-term relationship. QE AL RAYAN Qatar with DJIMKW Kuwait occurs 1 cointegration with a value of (0.015) which means it has a short-term relationship. Other pairs are not cointegrated. Furthermore, the co-integrated object pairs will then be tested using VECM, while the non-cointegrating object pairs are tested again using VAR to confirm the results.

VAR / VECM Stability Test

Table 6. VAR / VECM Stability Test Output

Variable	Modulus	VAR	VECM
JII and DJIMY	1		Stable
	0.79		
	0.01		
	0.01		
JII and DJTR	0.98	Stable	
	0.9		
JII and TDWL	0.93	Stable	

	0.93		
JII and QEAR	0.96	Stable	
	0.86		
JII and DJIMKW	1		Stable
	0.91		
	0.4		
	0.02		
DJIMY and DJTR	0.99	Stable	
	0.91		
DJIMY and TDWL	0.92	Stable	
	0.89		
DJIMY and QEAR	0.95	Stable	
	0.88		
DJIMY and DJIMKW	1		Stable
	0.78		
	0.38		
	0.03		
DJTR and TDWL	0.98	Stable	
	0.93		
DJTR and QEAR	0.99	Stable	
	0.95		
DJTR and DJIMKW	1		Stable
	0.63		
	0.32		
	0.15		
TDWL and QEAR	0.94	Stable	
	0.94		
TDWL and DJIMKW	0.93	Stable	
	0.6		
QEAR and DJIMKW	1		Stable
	0.73		
	0.36		
	0.05		

Source: Formatted data processing results from Eviews, 2020

Based on table 6, it is known that the modulus value of each object pair is not more than one, so that the VAR / VECM model is stable. So that the VAR / VECM estimation process can be carried out.

VAR/VECM Estimation

Table 7. VAR / VECM Estimation Results

	JII	DJIMY
JII & DJIMY	0.3635	-0.81552
	JII	DJTR
JII & DJTR	0.63736	1.12442
	JII	TDWL
JII & TDWL	-0.57781	12.423
	JII	QEAR
JII & QEAR	1.26092	0.35355
	JII	DJIMKW
JII & DJIMKW	-0.73508	1.15263

	DJIMY	DJTR
DJIMY & DJTR	0.50504	-0.12786
	DJIMY	TDWL
DJIMY & TDWL	0,02427	1,62186
	DJIMY	QEAR
DJIMY & QEAR	0,3869	2,00180 *
	DJIMY	DJIMKW
DJIMY & DJIMKW	0.48390	1.81795*
	DJTR	TDWL
DJTR & TDWL	-0.96831	1,05455
	DJTR	QEAR
DJTR & TDWL	0.37463	0.43132
	DJTR	DJIMKW
DJTR & DJIMKW	-0.30682	0.12835
	TDWL	QEAR
TDWL & QEAR	-0.29716	2.09433 *
	TDWL	DJIMKW
TDWL & DJIMKW	0.13986	0.63278
	QEAR	DJIMKW
QEAR & DJIMKW	0.26359	1.44089
t tabel (5%)	1,65833	

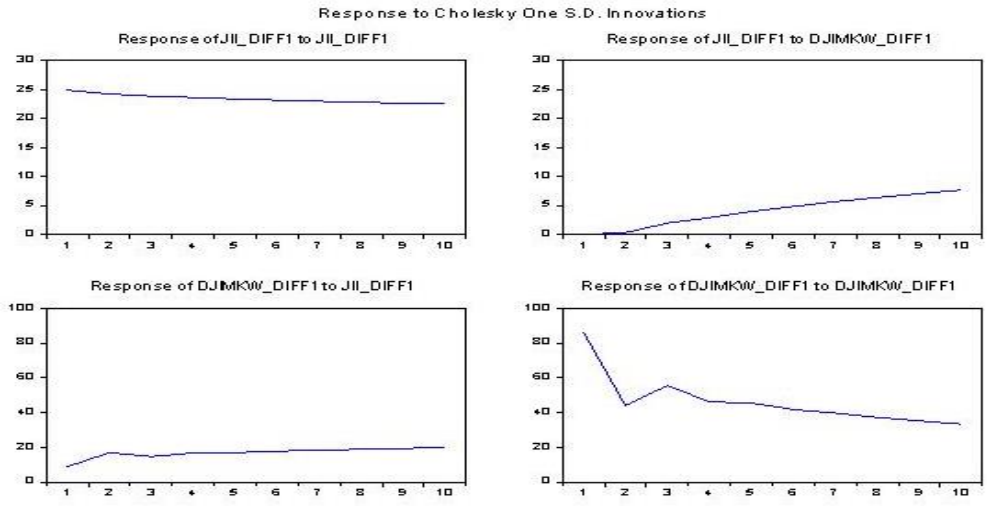
Source: Formatted data processing results from Eviews, 2020

Based on the VAR and VECM tests in table VII above, the stock market that has t count> t table (1.65833) is said to have a relationship between the stock market, namely DJIMY Malaysia with QE AL RAYAN Qatar (2.00180), DJIMY Malaysia and DJIMKW Kuwait (1.81795) as well as TDWL Saudi Arabia with QE AL RAYAN Qatar (2.09433) which has long-term influence.

Impulse Response Function (IRF)

JII Indonesia with DJIMKW kuwait

Graph 2: Impulse Response Function

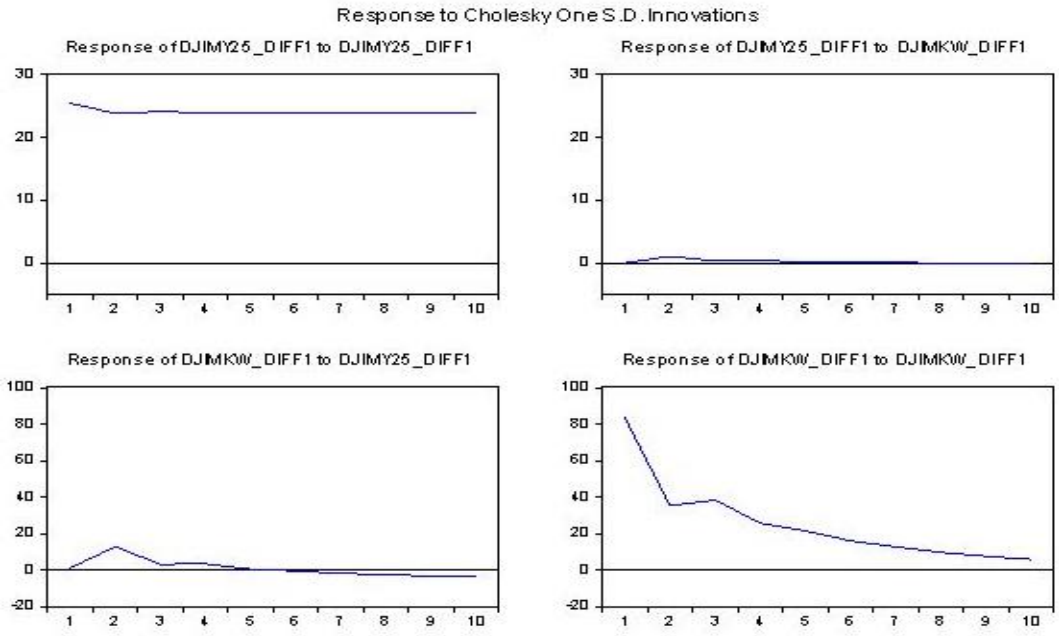


Source: Formatted data processing results from Eviews, 2020

Based on Graph 2, the response of JII Indonesia continues to increase towards DJIMKW Kuwait during the observation period, likewise the response of DJIMKW Kuwait to JII Jakarta tends to increase, the decline only occurs in the third period .

DJIMY Malaysia with DJIMKW Kuwait

Graph 3: Impulse Response Function

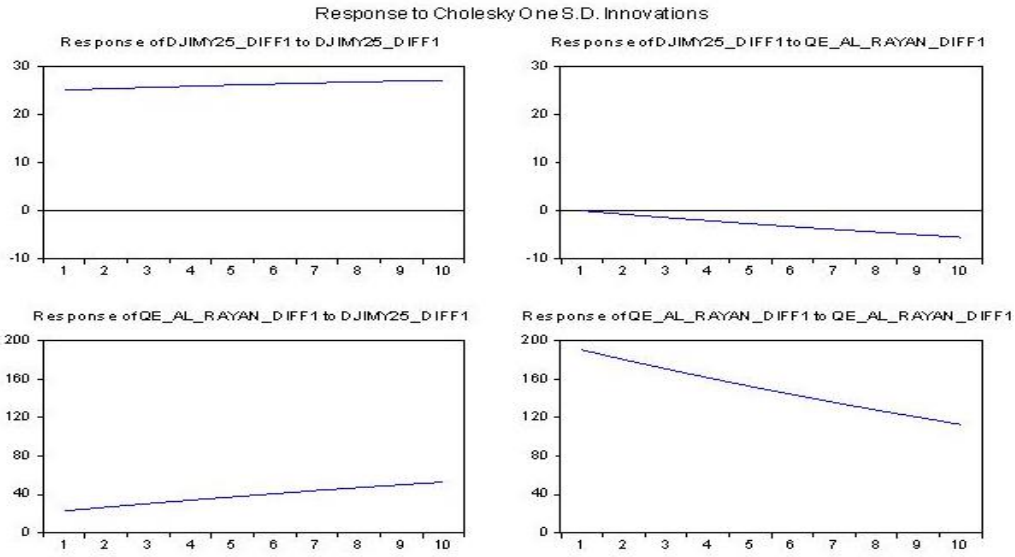


Source: Formatted data processing results from Eviews, 2020

Based on Graph 3, it appears that each shock to DJIMY Malaysia does not really have a permanent impact on DJIMKW Kuwait and vice versa, the trend tends to decline approaching the equilibrium point even negative. DJIMY Malaysia shock will make DJIKW Kuwait negative response and vice versa.

DJIMY Malaysia with QE Al Rayan Qatar

Graph 4: Impulse Response Function

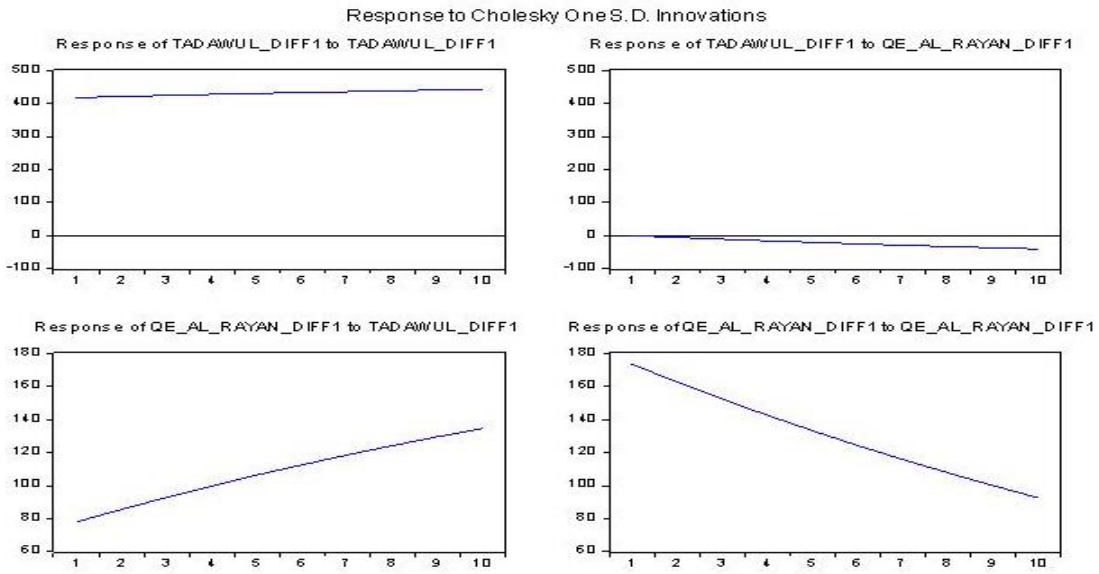


Source: Formatted data processing results from Eviews, 2020

Based on Graph 4, QEAR Qatar response to DJIMY Malaysia during all periods has an increasing trend. The shocks at DJIMY Malaysia had a permanent effect on QEAR Qatar. On the other hand, DJIMY Malasia's response to QEAR Qatar has a downward and negative trend away from the equilibrium point which means that when a shock occurs in QEAR Qatar, DJIMY Malaysia will respond negatively to shocks in QEAR Qatar.

Tadawul with QE al rayan

Graph 5: Impulse Response Function



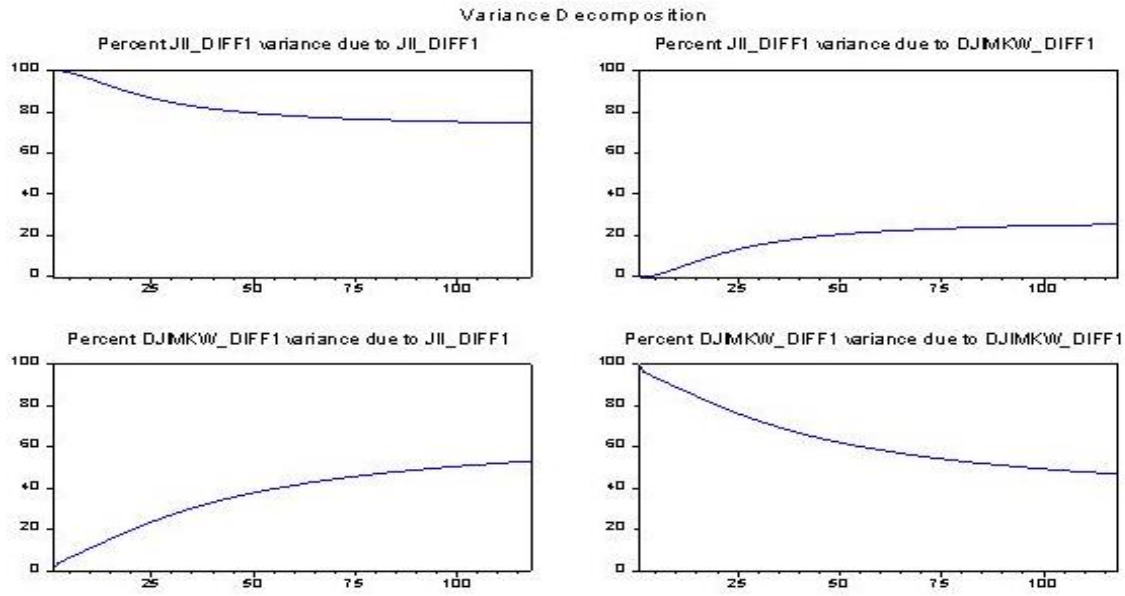
Source: Formatted data processing results from Eviews, 2020

Based on Graph 5, QEAR Qatar will respond permanently to shocks in Saudi Arabia's TDWL but Saudi Arabia's TDWL will respond negatively to shocks in QEAR Qatar as a decreasing and negative pattern moves away from the balance point.

Decompositon (VD) Variant

JII Jakarta with DJIMKW Kuwait

Graph 6: Variance Decomposition



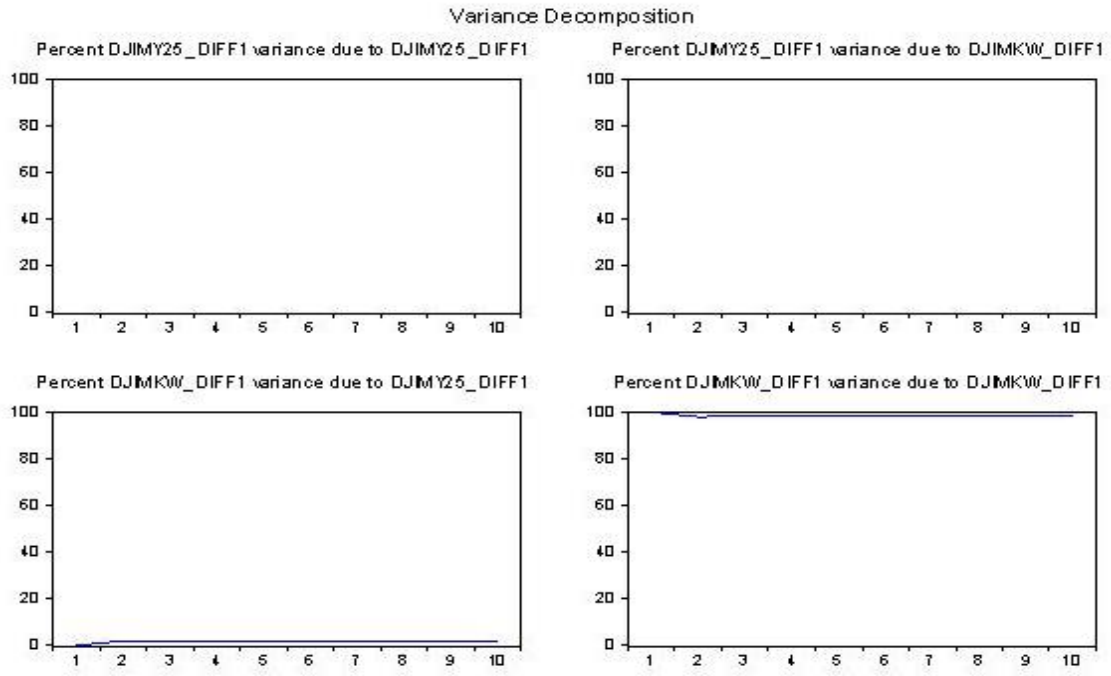
Source: Formatted data processing results from Eviews, 2020

Graph 6 shows that in year 1 when shocks occur, the JII variation is 100% contributed by the JII condition itself. In the 10th year, when there was a shock in JII Indonesia the variation was 95.95% due to changes in JII Indonesia and the remaining 4.04% was due to changes in DJIMKW Kuwait.

In year 1, when shocks appeared in DJIMKW Kuwait, 98.96% was caused by factors in DJIMKW Kuwait itself and 1.03% was due to changes in JII Indonesia. In the 10th year of JII Indonesia, the level of contribution to changes in DJIMKW Kuwait was 10.94% and 89.6% due to conditions in DJIMKW Kuwait itself.

DJIMY Malaysia with DJIMKW Kuwait

Graph 7: Variance Decomposition

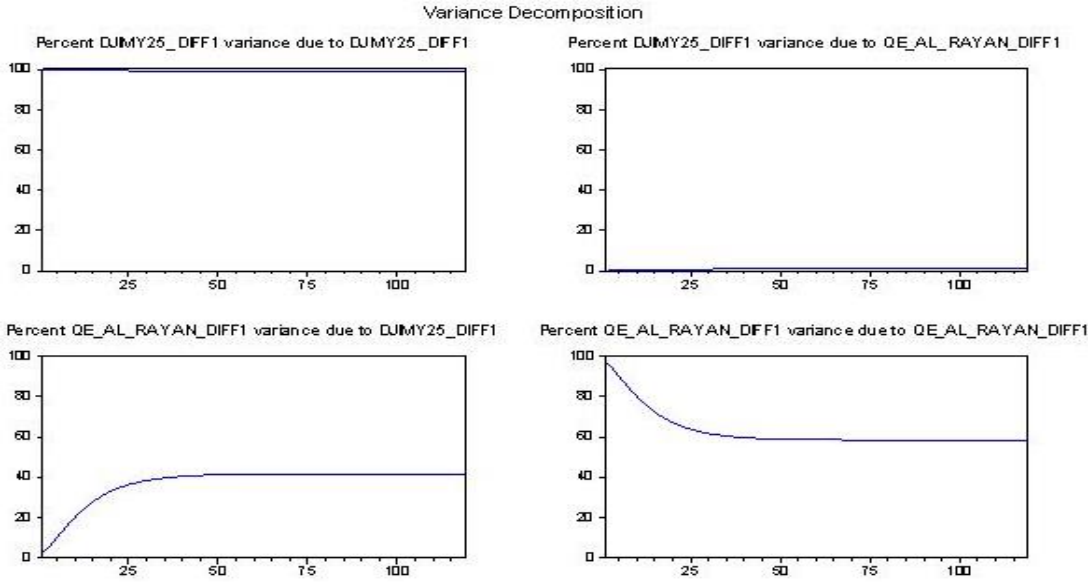


Source: Formatted data processing results from Eviews, 2020

Based on Graph 7, in year 1, the occurrence of variation in DJIMY Malaysia was 100% due to changes in conditions in DJIMY Malaysia itself, fluctuating for the following year. In the 10th year of shocks, 99.98% of the DJIMY variations were caused by DJIMY and the remaining 0.02% was caused by DJIMKW. Second, in the first year of shocks, the 99.98% variation in DJIMKW was caused by DJIMKW itself and the remaining 0.02% was caused by DJIMY Malaysia. The contribution of Kuwait's DJIMKW was increasing and in the 10th year it became 1.93%.

DJIMY Malaysia with QE Al Rayan Qatar

Graph 8: Variance Decomposition

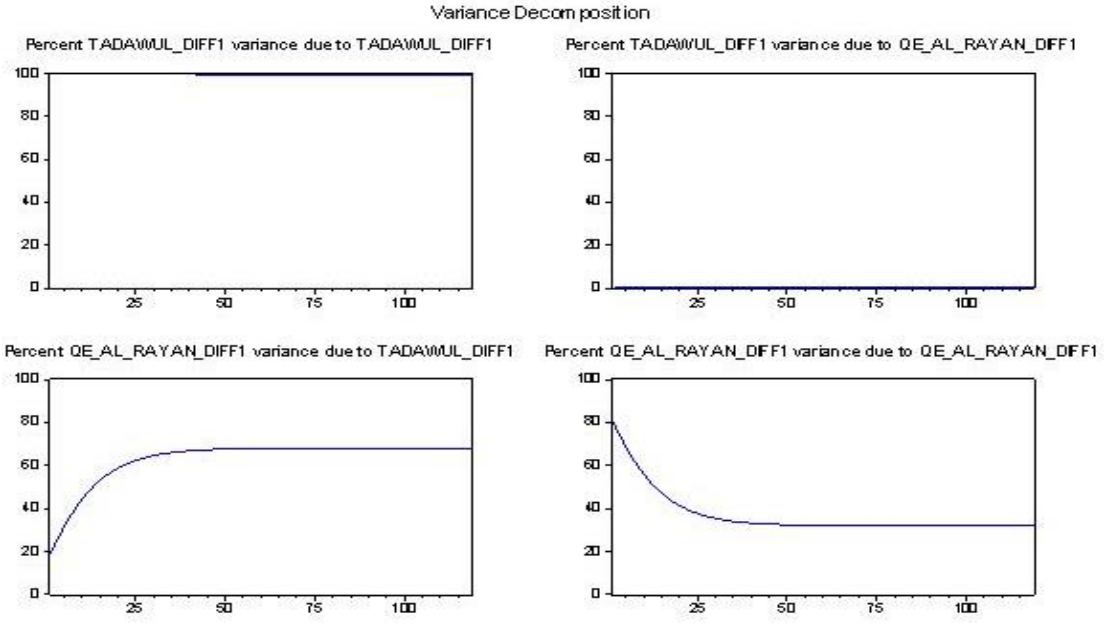


Source: Formatted data processing results from Eviews, 2020

Based on Graph 8, in the 1st year the Malaysian DJIMY variation was 100% due to the contribution of DJIMY Malaysia itself and in the 10th year it was 98.36% and the remaining 1.64% was due to QEAR Qatar. In the first year, 98.58% of Qatar QEAR was caused by QEAR Qatar itself and the remaining 1.42% was caused by DJIMY Malaysia, while in the 10th year it was 6.45%.

Tadwul Saudi Arabia with QE Al Rayan Qatar

Graph 9: Variance Decomposition



Source: Formatted data processing results from Eviews, 2020

Based on Graph 9, in year 1 the variation of TDWL in Saudi Arabia was 100% caused by the TDWL of Saudi Arabia itself. And so on, in the 10th year the shock occurred, the TDWL variation of 99.67% was caused by Saudi Arabia's TDWL and the remaining 0.34% was caused by QEAR. On the other hand, the 83.15% QEAR variation in the first year was caused by QEAR itself and the remaining 16.85% was caused by TDWL and increased in the 10th year the contribution of TDWL Saudi Arabia increased in providing QEAR variations, namely 40.55% and others caused by changes in QEAR Qatar itself.

DISCUSSION

JII Indonesia and DJIMY Malaysia

The Johansen cointegration test results in table 6 show (G, K, IRR) that there is two-way cointegration or short-term and long-term cointegration although it does not show a causal relationship. These results are also in line with the results of research by Karim, et al., (2009) showing that the Indonesian market is correlated with the national market in Asean in the short and long term. Countries that are geographically close and have close relations between markets, fellow member countries of the Association of Southeast Asian Nations (ASEAN) show a higher level of market integration. One of the goals of ASEAN is to smoothen the flow

of trade between its member countries and develop stronger regional economic ties, plus that Indonesia also has a co-movement with China and Japan (Wang and Guo, 2020)

The results of research by Youcef and Adewale, (2017) which examined the short and long term relationship between the stock market in Indonesia, the stock market in Malaysia, Saudi Arabia and Turkey from January 2000 to September 2014 and divided into two groups, namely before and after the global financial crisis using Johansen co-integration analysis. The result is to prove that the stock markets of Indonesia, Malaysia, Saudi Arabia and Turkey are integrated before and after the global financial crisis and especially in the post-crisis period.

Selvarajan and Ab-Rahim (2020) show that the period before the 1998 crisis the existence of regional financial integration had stimulated economic growth even though it was low in Asian countries. However, in the post-crisis period, the occurrence of financial integration was not significantly correlated with growth. These results also confirm the results of research by Ramdhan, et al., 2016 which tested the integration of the Malaysian stock market. The result is that the Malaysian stock market is integrated with only the stock markets of some Asian countries. In addition, it also confirms the results of research by Selvarajan and Ab-Rahim (2020) which show that the period before the 1998 crisis, the existence of regional financial integration had a spur of economic growth even though it was low in Asian countries. However, in the post-crisis period, the occurrence of financial integration does not have a significant correlation to growth Academic explanation is that there is no causal relationship, possibly due to the effects of the global financial crisis, the characteristics of the Malaysian and Indonesian Islamic stock markets are both growth-stage stock markets so they are not economic in texture countries that complement each other, besides that the types of industrial products are also almost the same because of relatively the same geographical conditions.

JII Indonesia and DJIMKW Kuwait

Based on the results of the Granger test in table 5, the results of the Johansen cointegration test in table VI, the Impulse Response Function (IRF) test in graph 2 shows that JII Indonesia and DJIMKW Kuwait have a causal relationship, there is cointegration and also show that the response of JII Indonesia continues to increase towards DJIMKW Kuwait during the observation period, likewise the DJIMKW Kuwait response to JII Jakarta tended to increase, the decline only occurred in the third period. These results reinforce the research results of Maghyereh, et el., (2005) that there is a relationship between economic development between Indonesia which is closely related to Kuwait.

However, Indonesia is a country with a large volume of oil imports annually and the Kuwaiti economy considers the oil sector as a top priority in its development strategy as a world oil exporting country. Kuwait continues to develop several oil fields in the northern part of the country. This project involves cooperation with several foreign oil companies that will play an important role in expanding oil exports, such as the collaboration between the Indonesian Oil Company (Pertamina) and the Kuwaiti national oil company, which collaborates in developments in the fields of petroleum, liquefied natural gas (LNG), and renewable energy. This result is also in line with the research results of Karim, et al., (2009) that the Indonesian stock market integrates with the stock market of countries in Asia.

DJIMY Malaysia and QEAR Qatar

Based on the results of the Granger test in table 5 and the results of the cointegration test in table VI, it shows that DJIMY Malaysia and QEAR Qatar have a long-term causality and relationship but are not integrated. This result is in accordance with the statements of (Thaib, 2016; McSparren, et al., 2017) and Qatar has investment and builds trade relations between countries with developing global economic powers in Asian countries such as investing in developing the agricultural sector in ASEAN countries. . Malaysian companies have secured a contract worth US $ 2.5 billion to prepare for the Qatar World Cup in 2022, the tourism industry cooperation agreement, has several agreements on the acceleration and mutual protection of investment which were signed on May 14, 2001.

Thus, we can say that the economic cooperation programs of the two countries include exhibitions. permanent industrial product in Doha in 2014, in which construction of the Harrods Hotel Commercial Complex by the Qatar Investment Foundation in Kuala Lumpur in 2013, construction of a tourist resort in Terengganu State in 2014 by Qatar Investment Cooperation, the opposite tower at the Petronas Twin Tower in Kuala Lumpur City by Qatari Diar. The closeness of the two countries because they are both members of the OIC and both have a moderate foreign policy commitment in creating peace in Islamic countries.

DJIMY Malaysia and DJIMKW Kuwait

Based on the results of the cointegration test in table 6 and the VAR / VECM test in table VII, it shows that DJIMY Malaysia and DJIMKW Kuwait have a long-term cointegration and relationship. This result is in accordance with (Niu, 2010) that there have been many

economic cooperation between the two countries, such as the agreement between the Malaysian government and the Kuwait Finance House (KFH) in the Malaysia's Iskandar project.

Development Region (IDR) in the state of Johor. In the Islamic banking sector, the Kuwait Financial House (KFH) also provides Islamic banking services in Malaysia (Abidin, et al., 2014; Abidin and Haseeb, 2018). However, this study does not confirm the research of Marashdeh and Shrestha, (2010) that the stock market in GCC countries is not fully integrated and there is no evidence of cointegration between the GCC stock market and developed markets.

DJIMKW Kuwait and QEAR Qatar

Granger test results in table V, Johansen cointegration test results in table 6 indicate that QEAR Qatar against DJIMKW Kuwait has a causal relationship, is cointegrated and has a good relationship in the short and long term. This result is in line with the research of Bouoiyour and Selmi (2019) that Kuwait and Qatar are geographically close together so that the volatility of the stock market in Kuwait increases when the crisis occurs in Qatar. Kuwait politically tries to mediate the conflict between Qatar and other Gulf countries by acting neutral, maintaining the same distance from each country as during the Qatar Crisis and Saudi Arabia (Martini, et al., 2016). There is a transfer of local information channels between individual investors that are geographically close together used in making equity decisions (Baltakys, et al., 2019).

DJIMKW Kuwait and DJTR Turkey

Granger test results in table V, Johansen cointegration test results in table 6 and VAR test show that the Turkish DJTR and Kuwait DJIMKW are statistically cointegrated but there is no causality relationship. This result is in accordance with the research of Marashdeh, and Shrestha, (2010) that the stock market in GCC member countries is not fully integrated and there is no evidence of cointegration between the GCC stock market and developed country markets. However, this result is not in accordance with (Atiqi, et al., 2017) that Turkey and Kuwait have cooperation in the oil energy sector, Kuwait as a member of the GCC also exports oil to Turkey. Kuwait is ranked third among the GCC member countries investing in real estate in Turkey and the number has continued to increase sharply from 2016 and 2017.

In contrast, Turkish construction companies have long been involved in various projects to build a new terminal at Kuwait airport. The two countries also collaborated in establishing the field of Islamic banking, in the 1980s established Al Baraka Turk and Kuveyt Turk with

capital from Saudi Arabia, Saudi Arabia and Kuwait. In the Electrical energy sector, in September 2012, a consortium led by the KuwaitiAswar Group and South Korean companies - CX Concentrix Solar Korea, KEPCO, and Kincoa committed to developing solar energy in Turkey worth US $ 450 million. The tourism sector shows an increase in Kuwaiti tourists visiting Turkey (Habibi, 2019).

TDWL Saudi Arabia and QEAR Qatar

Granger test results in table V, Johansen cointegration test results in table 6 and VAR and VECM tests in table VII, Impulse Response Function (IRF) test in graph 5, shows that Saudi Arabia's TDWL and QEAR Qatar have a causal relationship, have a long-term relationship. long but not cointegrated. QEAR Qatar will respond permanently to shocks in Saudi Arabia's TDWL but Saudi Arabia's TDWL will respond negatively to shocks in QEAR Qatar as a downward and negative pattern moves away from the equilibrium point. This result is consistent with Jane Kinninmont's (2019) research that Saudi Arabia and Qatar are geographically close together as members of the GCC, which has been a cooperation ag reement including the economy since 1981 and both are oil exporting countries so that oil is the main support for the country's economy.

Based on the reason, the economy will be similar and unidirectional in which the negative response of the Saudi market to shocks in Qatar is in line with the statement of Khatib (2013) that the political relationship between Saudi Arabia and Qatar is not very harmonious. Qatar claims that Saudi Arabia is not as neutral as in the Lebanon and Iran conflicts. This political policy has an impact on economic policy. However, it is not in accordance with the research results of Marashdeh and Shrestha (2010) that the stock market in member countries of the Cooperation Council of the Gulf Arab States (The Gulf Cooperation Council) or abbreviated as GCC is not fully integrated and it is not financially proven that there is cointegration between GCC stock market and developed market.

In addition, the characteristics of the portfolios of the GCC member countries differ so that international investors can diversify their portfolios and allow long-term economic benefits when investing in the GCC market. Marashdeh, et al., (2014) also show that there is no evidence of a two-way relationship between financial sector development and economic growth in the short term because Saudi Arabia does not offer attractive short-term economic policies for stock market players. The development of the financial industry and economic growth has a positive and significant relationship in the long run.

Sharia stock index pairs between other countries are not statistically cointegrated and have no relationship. These results are consistent with the results of research by (Alotaibi & Mishra, 2017) show that that the average integration index estimation results based on the market portfolios of GCC member countries and the world market portfolios have decreased in value in the period after the global financial crisis. Saudi Arabia (Maghyereh et al., 2005). Frequent conflicts in GCC countries also affect financial integration. Assaf (2003) show that the Saudi Arabian stock market has been slow to respond to shocks emanating from other countries' stock markets and the stock markets of the GCC member countries are not completely efficient on regional news. The positive side provides opportunities for investors to diversify their portfolios in GCC member regions.

However, the results of this study are inconsistent with the results of research by Youcef and Adewale (2017) that there is a co-integration of the Indonesian stock market with the Saudi Arabian stock market before and after the global financial crisis. Assaf (2003) who used autoregressive vector analysis to test the dynamic interaction between stock market returns of the six countries of the Gulf Cooperation Council (GCC) (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates) and there is a feedback effect among the GCC stock market.

Chebab, et al., (2020) who tested integration in Eastern, Central and North African countries, stated that in the short term the development of capital markets does not necessarily accompany economic growth and does not have a significant relationship. Financial development and economic growth are only positively correlated and have positive implications only to a certain extent, not in all conditions and in all countries. It is necessary to synchronize policies in the financial sector and other economic sectors.

CONCLUSION

The integration of major Islamic stock indexes in the world in the short and long term has not been fully proven as reflected in the causality relationship, short and long term relationships, in response to shocks. Sharia Stock Index pairs that have a causal relationship are JII Indonesia with DJIMKW Kuwait, DJIMY Malaysia with QEAR Qatar, TDWL Saudi Arabia with QEAR Qatar and QEAR Qatar with DJIMKW Kuwait. The Sayariah Stock Index which is co-integrated are JII Indonesia with DJIMY Malaysia, JII Indonesia and DJIMKW Kuwait, DJIMY Malaysia with DJIMKW Kuwait, DJTR Turkey with DJIMKW Kuwait, QEAR Qatar with DJIMKW Kuwait. The Islamic stock index pairs confirmed by the VAR and VECM tests

are only DJIMY Malaysia with QEAR Qatar, DJIMY Malaysia with DJIMKW Kuwait, and TDWL Saudi Arabia with QEAR Qatar.

Based on the Impulse Response Function (IRF) and Varian Decomposite (VD) test, the response of JII Indonesia to shocks at the Kuwait DJIMKW increased during the observation period and vice versa. the decline only occurred in the third period. In year 1, shocks at DJIMKW Kuwait had no effect on variations in JII Indonesia and in year 10 also had a small contribution. The contribution of the JII Indonesia event to DJIMKW in the 1st year was small but increased every year until the 10th year. Moreover, the response to the shock of the DJIMY Malaysia pairing with DJIMKW did not really have a permanent impact, and vice versa, the trend tended to decline even negatively. In the 1st year, the Malaysian DJIMY variation did not have a shock effect in the Kuwait DJIMKW, while in the 10th year the DJIMY variation due to shocks in the Kuwait DJIMKW was very small, and vice versa even though the contribution of DJIMY from the 1st to the 10th year was increasing.

QEAR Qatar's response to Malaysia's DJIMY shocks is permanent and has an upward trend. On the other hand, DJIMY Malaysia's response to the QEAR QEAR shock was on a downward and negative trend. In year 1, QEAR Qatar did not contribute to the DJIMY variation and DJIMY Malaysia's contribution to QEAR Qatar was also small. In the 10th year, the contribution of each Islamic index increased. Therefore, Qatar's QEAR response shows a permanent response to shocks in Saudi Arabia's TDWL but Saudi Arabia's TDWL actually responds negatively to shocks in Qatar's QEAR. In the first year, Saudi Arabia's TDWL variation was not caused by events in QEAR Qatar. Sharia issues have not become an issue that is considered crucial in the consideration of stock investors in making decisions related to stock investment. In addition, the number of countries with Islamic stock indices used as a sample has not been able to reveal significant variations between Islamic stock indices between countries because not all countries have Islamic stock indices.

Finally, this study also has limitations, which the Islamic stock index as a sample is dominated by GCC member countries namely Kuwait, Qatar and Saudi Arabia which are the samples. The results of the study show that in fact the sample test does not all have a causal relationship. This means that the movement of stock prices in these countries is not only influenced by events in member countries of the Islamic Cooperation Organization. Global trade cooperation extends beyond the members of the Organization of Islamic Cooperation. Furthermore, integration indicators need to be examined with other integration indicators to get stronger observations.

REFERENCES

Abdul Karim, B., Akila Mohd. Kassim, N., & Affendy Arip, M. (2010). The subprime crisis and Islamic Stock Markets Integration. *International Journal of Islamic and Middle Eastern Finance and Management*, *3*(4), 363–371. https://doi.org/10.1108/17538391011093298

Abidin, I. S. Z., & Haseeb, M. (2018). Malaysia-GCC bilateral trade, macroeconomic indicators and islamic finance linkages: A gravity model approach. *Academy of Accounting and Financial Studies Journal*, *22*(SI), 1-7.

Abidin, I. S. Z., Bakar, N. A. A., & Haseeb, M. (2014). An empirical analysis of exports between Malaysia and TPP member countries: Evidence from a panel cointegration (FMOLS) model. *Modern Applied Science*, *8*(6). https://doi.org/10.5539/mas.v8n6p238

Abidin, I. S., Jantan, M. D., Satar, N. M., & Haseeb, M. (2014). Trade linkages between Malaysia and the OIC member countries: Empirical evidence based on Gravity Model. *American Journal of Applied Sciences*, *11*(11), 1938–1944. https://doi.org/10.3844/ajassp.2014.1938.1944

Abul, S. J. (2019). The dynamic relationship between stock and real estate prices in Kuwait. *International Journal of Economics and Finance*, *11*(5), 30. https://doi.org/10.5539/ijef.v11n5p30

Acharya, V. V., & Pedersen, L. H. (2005). Asset pricing with liquidity risk. *Journal of Financial Economics*, *77*(2), 375–410. https://doi.org/10.1016/j.jfineco.2004.06.007

Agurto, Y. M. C., Rodriguez, V. H. P., Delgado, F. M. C., Santa Cruz, L. D. C. S., Ramírez, F. B., & Gavidia, M. J. F. (2023). Relationship of Cash Management to Profitability of Cement Companies Listed on the Lima Stock Exchange. *International Journal of Professional Business Review*, *8*(4), e01616-e01616.

Ajmi, A. N., Hammoudeh, S., Nguyen, D. K., & Sarafrazi, S. (2014). How strong are the causal relationships between Islamic stock markets and conventional financial systems? evidence from linear and nonlinear tests. *Journal of International Financial Markets, Institutions and Money*, *28*, 213–227. https://doi.org/10.1016/j.intfin.2013.11.004

Aladesanmi, O., Casalin, F., & Metcalf, H. (2019). Stock market integration between the UK and the US: Evidence over eight decades. *Global Finance Journal*, *41*, 32–43. https://doi.org/10.1016/j.gfj.2018.11.005

Albulescu , C. T., & Pepin, D. (2018). Monetary integration, money-demand stability, and the role of monetary overhang in forecasting inflation in CEE countries. *Journal of Economic Integration*, *33*(4), 841–879. https://doi.org/10.11130/jei.2018.33.4.841

Ali, S., Shahzad, S. J., Raza, N., & Al-Yahyaee, K. H. (2018). Stock market efficiency: A comparative analysis of islamic and conventional stock markets. *Physica A: Statistical Mechanics and Its Applications*, *503*, 139–153. https://doi.org/10.1016/j.physa.2018.02.169

Allen, P. R., & Stein, J. L. (1990). Capital Market Integration. *Journal of Banking & Finance*, *14*(5), 909–928. https://doi.org/10.1016/0378-4266(90)90020-3

Almshabbak, A. N. S., & Chouaibi, J. (2023). Measuring the Level of Voluntary Disclosure in Commercial Banks and its Effect on Improving Financial Performance: an Applied Study on Number of Commercial Banks in the Iraqi Stock Exchange. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(1), 6.

Al Maani, A., Issa, G., Alghananim, M. A. M., & Aljada, A. M. (2023). The Impact of the Board of Directors' Characteristics and Ownership Structure on the Sustainable Development Disclosure in the Banks Listed on the Amman Stock Exchange. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(4), 18.

Alotaibi, A. R., & Mishra, A. V. (2017). Time Varying International Financial integration for GCC Stock Markets. *The Quarterly Review of Economics and Finance*, *63*, 66–78. https://doi.org/10.1016/j.qref.2016.03.001

Aloui, C., Hammoudeh, S., & Hamida, H. B. (2015). Co-movement between Sharia stocks and Sukuk in the GCC markets: A Time-frequency analysis. *Journal of International Financial Markets, Institutions and Money*, *34*, 69–79. https://doi.org/10.1016/j.intfin.2014.11.003

Assaf, A. (2003). Transmission of stock price movements: The case of gcc stock markets. *Review of Middle East Economics and Finance*, *1*(2), 171–189. https://doi.org/10.1080/1475368032000139305

Assidenou, K. E. (2011). Cointegration of major stock market indices during the 2008 global financial distress. *International Journal of Economics and Finance*, *3*(2). https://doi.org/10.5539/ijef.v3n2p212

Atiqi, S. A., Long, C., Young, K. E., & Damodaran, R. (2017). (rep.). *Turkey-GCC Trade and Business Relations*. Oxford Gulf & Arabian Peninsula Studies Forum .

Baghaee, V., Etemadi, H., & Sepasi, S. (2023). Modeling accounting profit behavior based on events theory a comparative study of companies listed on the Tehran and Istanbul stock exchange. *International Journal of Professional Business Review*, *8*(2), e01352-e01352.

Baltakys, K., Baltakienė, M., Kärkkäinen, H., & Kanniainen, J. (2019). Neighbors matter: Geographical distance and trade timing in the stock market. *Finance Research Letters*, *31*. https://doi.org/10.1016/j.frl.2018.11.013

Barberis, N., Shleifer, A., & Wurgler, J. (2005). Comovement. *Journal of Financial Economics*, *75*(2), 283–317. https://doi.org/10.1016/j.jfineco.2004.04.003

Bartov, E., Goldberg, S. R., & Kim, M. (2005). Comparative value relevance among German, U.S., and International Accounting Standards: A German Stock Market Perspective. *Journal of Accounting, Auditing & Finance*, *20*(2), 95–119. https://doi.org/10.1177/0148558x0502000201

Ben Rejeb, A., & Boughrara, A. (2015). Financial integration in emerging market economies: Effects on volatility transmission and contagion. *Borsa Istanbul Review*, *15*(3), 161–179. https://doi.org/10.1016/j.bir.2015.04.003

Berben, R.P., & Jansen, W. J. (2005). Comovement in international equity markets: A sectoral view. *Journal of International Money and Finance*, *24*(5), 832–857. https://doi.org/10.1016/j.jimonfin.2005.04.001

Bley, J. (2009). European Stock Market Integration: Fact or fiction? *Journal of International Financial Markets, Institutions and Money*, *19*(5), 759–776. https://doi.org/10.1016/j.intfin.2009.02.002

Bouoiyour, J., Selmi, R., & Wohar, M. E. (2018). Are Islamic stock markets efficient? A multifractal detrended fluctuation analysis. *Finance Research Letters*, *26*, 100–105. https://doi.org/10.1016/j.frl.2017.12.008

Breitung, J., & Pesaran, M. H. (2008). Unit roots and cointegration in panels (pp. 279-322). Springer Berlin Heidelberg..

Buigut, S., & Kapar, B. (2020). Effect of Qatar diplomatic and economic isolation on GCC Stock Markets: An event study approach. *Finance Research Letters*, *37*, 101352. https://doi.org/10.1016/j.frl.2019.101352

Carabias, J. M. (2018). The real-time information content of Macroeconomic News: Implications for firm-level earnings expectations. *Review of Accounting Studies*, *23*(1), 136–166. https://doi.org/10.1007/s11142-017-9436-9

Chebab, D., Mazlan, N. S., Ngah, W. A., & Chin, L. (2020). Is finance-growth nexus linear in selected countries of Middle East and Northern Africa? *Journal of Economic Integration*, *35*(2), 326–352. https://doi.org/10.11130/jei.2020.35.2.326

Chelley-Steeley, P., Lambertides, N., & Savva, C. S. (2017). Sentiment, order imbalance, and co-movement: An examination of shocks to retail and institutional trading activity. *European Financial Management*, *25*(1), 116–159. https://doi.org/10.1111/eufm.12146

Click, R. W., & Plummer, M. G. (2005). Stock market integration in ASEAN after the Asian Financial Crisis. *Journal of Asian Economics*, *16*(1), 5–28. https://doi.org/10.1016/j.asieco.2004.11.018

Del Negro, M., & Brooks, R. (2002). International Stock returns and Market Integration: A regional perspective. *IMF Working Papers*, *02*(202), 1. https://doi.org/10.5089/9781451874419.001

Dewandaru, G., Rizvi, S. A., Masih, R., Masih, M., & Alhabshi, S. O. (2014). Stock market co-movements: Islamic versus conventional equity indices with multi-timescales analysis. *Economic Systems*, *38*(4), 553–571. https://doi.org/10.1016/j.ecosys.2014.05.003

Diem, N. P. N. (2023). The impact of corporate social responsibilities on Earnings Management: Evidence from Vietnam. *International Journal of Professional Business Review*, *8*(2), e01065-e01065.

Donadelli, M. (2013). Global Integration and emerging stock market excess returns. *Macroeconomics and Finance in Emerging Market Economies*, *6*(2), 244–279. https://doi.org/10.1080/17520843.2013.782885

Easley, D., O'Hara, M., & Yang, L. (2016). Differential access to price information in financial markets. *Journal of Financial and Quantitative Analysis*, *51*(4), 1071–1110. https://doi.org/10.1017/s0022109016000491

El Khamlichi, A., Sarkar, K., Arouri, M., & Teulon, F. (2014). Are Islamic equity indices more efficient than their conventional counterparts? evidence from major global index families. *Journal of Applied Business Research (JABR)*, *30*(4), 1137. https://doi.org/10.19030/jabr.v30i4.8660

Elbadry, A., Gounopoulos, D., & Skinner, F. (2015). Governance quality and information asymmetry. *Financial Markets, Institutions & Instruments*, *24*(2-3), 127–157. https://doi.org/10.1111/fmii.12026

Eleftherios, & Evagelos. (2011). International Stock Markets: A co-integration analysis. *European Research Studies Journal* , *XIV*(Issue 4), 113–130. https://doi.org/10.35808/ersj/338

Emiris, M. (2002). Measuring capital market integration, BIS Papers chapters, in: Bank for International Settlements (ed.), *Market functioning and central bank policy, 12*, 200-221, https://www.bis.org/publ/bppdf/bispap12k.pdf

Ergun, U., & Hassan, S. M. N. A. (2009). Comovements and Linkages of Emerging Stock Markets: A Case Study from OIC Member Countries. *Journal of Economic Cooperation and Development*, *30*(4), 105-120.

Fama, E. F., Fisher, L., Jensen, M. C., & Roll, R. (1969). The adjustment of stock prices to new information. *International Economic Review*, *10*(1), 1. https://doi.org/10.2307/2525569

Ferrario, A., Guidolin, M., & Pedio, M. (2018). Comparing in- and out-of-sample approaches to variance decomposition-based estimates of network connectedness an application to the Italian banking system. *Quantitative Finance and Economics*, *2*(3), 661–701. https://doi.org/10.3934/qfe.2018.3.661

Flayyih, H. H., & Khiari, W. (2022). A Comparative Study to Reveal Earnings Management in Emerging Markets: Evidence from Tunisia and Iraq. *International Journal of Professional Business Review*, *7*(5), e0815-e0815.

Froot, K., & Dabora, E. (1999). How are stock prices affected by the location of trade? *Journal of Financial Economics*, *53*, 189–216. https://doi.org/10.3386/w6572

Gangadharan, S. R., & Yoonus, C. A. (2012). Global Financial Crisis and Stock Market Integration: A study on the impact of global financial crisis on the level of financial integration between the US and Indian Stock Markets. *Asia-Pacific Journal of Management Research and Innovation*, *8*(2), 101–110. https://doi.org/10.1177/2319510x1200800203

Giovannini, A. (2010). Why the European Securities Market is not fully integrated. *Europe and the Euro*, 255–283. https://doi.org/10.7208/chicago/9780226012858.003.0008

Goetzmann, W., Li, L., & Rouwenhorst, K. G. (2005). Long-term global market correlations. *The Journal of Business* , *Vol. 78*, (1), 1–38. https://doi.org/https://doi.org/10.1086/426518

Goodman, T., Neamtiu, M., & Zhang, X. F. (2017). Fundamental analysis and option returns. *Journal of Accounting, Auditing & Finance*, *33*(1), 72–97. https://doi.org/10.1177/0148558x17733593

Gourene, G. A., Mendy, P., & Diomane, L. (2019). Beginning an African stock markets integration? A wavelet analysis. *Journal of Economic Integration*, *34*(2), 370–394. https://doi.org/10.11130/jei.2019.34.2.370

Guesmi, K., & Nguyen, D. K. (2011). How strong is the global integration of emerging market regions? an empirical assessment. *Economic Modelling*, *28*(6), 2517–2527. https://doi.org/10.1016/j.econmod.2011.07.006

Guesmi, K., & Nguyen, D. K. (2014). Time-varying regional integration of stock markets in Southeast Europe. *Applied Economics*, *46*(11), 1279–1290. https://doi.org/10.1080/00036846.2013.870656

Guesmi, K., & Teulon, F. (2014). The determinants of regional stock market integration in Middle East: A conditional ICAPM approach. *International Economics*, *137*, 22–31. https://doi.org/10.1016/j.inteco.2013.10.006

Guesmi, K., Arouri, M. H., Moisseron, J.-Y., & Teulon, F. (2013). Integration in middle east stock markets: Determinants, effects and Evolutions. *Journal of Applied Business Research (JABR)*, *29*(5), 1301. https://doi.org/10.19030/jabr.v29i5.8014

Guesmi, K., Teulon, F., & Lahiani, A. (2013). Australias integration into the ASEAN-5 Region. *Journal of Applied Business Research (JABR)*, *29*(6), 1607. https://doi.org/10.19030/jabr.v29i6.8198

Habibi, N. (2019). Turkey‟ s Economic Relations with Gulf States in the Shadow of the 2017 Qatar Crisis. *Middle East Brief*, 132, 101-200.

Hazem A. Marashdeh, and Husam-Aldin N. Al-Malkawi, 2014, Financial Deepening and Economic Growth in Saudi ArabiaJournal of Emerging Market Finance 13(2) 139–154, DOI: 10.1177/0972652714541339

Hazem Marashdeh, Min B. Shrestha, 2010, Stock market integration in the GCC countries, International Research Journal of Finance and Economics 37, March, 102-114

Hillier, D., & Loncan, T. (2017). Stock market integration, cost of equity capital, and Corporate Investment: Evidence from Brazil. *European Financial Management*, *25*(1), 181–206. https://doi.org/10.1111/eufm.12147

Hoong, T. B., Ling, T. Y., Hassan, S., & Abdullah, N. M. H. (2023). Stock Returns and Inflation: A Bibliometric Analysis. *International Journal of Professional Business Review*, *8*(2), e01547-e01547.

Ibrahim Ahmed Onour, 2009, Financial integration of GCC capital markets: Evidence of non-linear cointegration, Afro-Asian Journal of Finance and Accounting 1(3), March, 251-265, DOI: 10.1504/AAJFA.2009.024301

İlhan, B. (2020). Stock market liberalization: Effects on stock market development in the emerging Islamic countries. *International Journal of Islamic Economics and Finance Studies*. https://doi.org/10.25272/ijisef.629755

Irwan Shah Zainal Abidin, and Muhammad Haseeb, 2018, Malaysia-GCC Bilateral Trade, Macroeconomic Indicators And Islamic Finance Linkages: A Gravity Model Approach, Academy of Accounting and Financial Studies Journal, Volume 22, Special Issue, 1-7

Jabri, A., Guesmi, K., & Abid, I. (2013). Determinants of foreign direct investment in MENA region: Panel co-integration analysis. *Journal of Applied Business Research (JABR)*, *29*(4), 1103. https://doi.org/10.19030/jabr.v29i4.7976

Jamal Bouoiyour and Refk Selmi, 2019, The Changing Geopolitics in the Arab World: Implications of the 2017 Gulf Crisis for Business, IRMAPE, ESC Pau Business school, https://EconPapers.repec.org/RePEc:hal:journl:hal-02071921

Jane Kinninmont, 2019, The Gulf Divided The Impact of the Qatar Crisis Research Paper, Middle East and North Africa Programme, Chatham House, May, 1-42

Jason McSparren, Hany Besada and Vasundhara Saravade, 2017, Qatar's Global Investment Strategy for Diversification and Security in the Post-Financial Crisis Era, Qatar National Priority Research Program, May, Research Paper No. 02/17/EN, NPRP No.: 6-1272-5-160, ISBN: 978-0-9949034-7-1, 1-29

Jawadi, F., Jawadi, N., & Idi Cheffou, A. (2019). Wavelet analysis of the conventional and Islamic stock market relationship ten years after the global financial crisis. *Applied Economics Letters*, *27*(6), 466–472. https://doi.org/10.1080/13504851.2019.1631438

Jeffrey Martini, Becca Wasser, Dalia Dassa Kaye, Daniel Egel, and Cordaye Ogletree, 2016, The Outlook for Arab Gulf Cooperation, RAND Corporation, Santa Monica, Calif, 1-101, ISBN: 978-0-8330-9307-3

John H. Cochrane, 2005, Time Series for Macroeconomics and Finance, Graduate School of Business University of Chicago,

Jörg Breitung, and M. Hashem Pesaran, 2005, Unit Roots and Cointegration in Panels, Discussion Paper Series 1: Economic Studies No 42, Deutsche Bundesbank, Wilhelm-Epstein-Strasse 14, 60431 Frankfurt am Main, ISBN 3–86558–105–6

Jose M. Carabias, The real-time information content of macroeconomic news: implications for firm-level earnings expectations, Rev Account Stud (2018) 23:136–166, https://doi.org/10.1007/s11142-017-9436-9

Karasik , T., Wehrey, F., & Strom , S. (2007). Islamic stock markets in a global context. *Chicago Journal of International Law*, *7*(2), 275–296. https://doi.org/https://chicagounbound.uchicago.edu/cjil/vol7/iss2/3

Karim, B. A., & Majid, M. S. (2009). International linkages among stock markets of Malaysia and its major trading partners. *Journal of Asia-Pacific Business*, *10*(4), 326–351. https://doi.org/10.1080/10599230903340304

Karim, B. A., & Majid, M. S. (2009). International linkages among stock markets of Malaysia and its major trading partners. *Journal of Asia-Pacific Business*, *10*(4), 326–351. https://doi.org/10.1080/10599230903340304

Karim, B. A., Majid, M. S., & Abdul Karim, S. A. (2009). Integration of stock markets between Indonesia and its major trading partners. *Gadjah Mada International Journal of Business*, *11*(2), 229. https://doi.org/10.22146/gamaijb.5526

Karim, Mohd Zaini And Gee, Chan Sok, 2006, Stock Markets Integration Between Malaysia and Trade Partners, Applied Econometrics and International Development, Vol.6, No.3. 203-224

Karim, Mohd Zaini, And Gee, Chan Sok, 2006, Stock Market Integration Between Malaysia And Its Major Trading Partners (1994-2002), Applied Econometrics and International Development Vol.6, No. 3, 203-224

Kasa, K. (1992). Common stochastic trends in international stock markets. *Journal of Monetary Economics*, *29*(1), 95–124. https://doi.org/10.1016/0304-3932(92)90025-w

Kearney, C., & Lucey, B. M. (2004). International Equity Market Integration: Theory, evidence and implications. *International Review of Financial Analysis*, *13*(5), 571–583. https://doi.org/10.1016/j.irfa.2004.02.013

Khatib, L. (2013). Qatar's foreign policy: The Limits of Pragmatism. *International Affairs*, *89*(2), 417–431. https://doi.org/10.1111/1468-2346.12025

Kollias, C., Papadamou, S., & Siriopoulos, C. (2013). European markets' reactions to exogenous shocks: A high frequency data analysis of the 2005 London bombings. *International Journal of Financial Studies*, *1*(4), 154–167. https://doi.org/10.3390/ijfs1040154

Kumar, A., Page, J. K., & Spalt, O. G. (2011). Religious beliefs, gambling attitudes, and financial market outcomes. *Journal of Financial Economics*, *102*(3), 671–708. https://doi.org/10.1016/j.jfineco.2011.07.001

Litsareva, E. (2017). Success factors of Asia-Pacific fast-developing regions' technological innovation development and economic growth. *International Journal of Innovation Studies*, *1*(1), 72–88. https://doi.org/10.3724/sp.j.1440.101006

Lukman Thaib. (2019). The Evolution of the Malaysian Diplomatic Relation with West Asia: Special Reference to Malaysia-Qatar Relations. *Global Journal of Human-Social Science*, *19*(H7), 1–15. https://socialscienceresearch.org/index.php/GJHSS/article/view/2988

Maghyereh, A., Zoubi, H. A., & Abderraheem, S. (2005). Is there a diversification benefit from investing in the Arab Gulf stock markets? A multivariate Garch analysis. *Global Business and Economics Review*, *7*(4), 324. https://doi.org/10.1504/gber.2005.008293

Majid, M., Yusof, R. M., & Razal, A. N. (2007). Dynamic Financial Linkages Among Selected OIC Countries. *Journal of Economic Cooperation Among Islamic Countries*, *28*(2).

Mazouz, K., Mohamed, A., & Saadouni, B. (2016). Stock return comovement around the dow jones islamic market world index revisions. *Journal of Economic Behavior & Organization*, *132*, 50–62. https://doi.org/10.1016/j.jebo.2016.05.011

Mittoo, U. R., & Rakhmayil, S. (2011). Estimating time-varying capital market integration in the EMU. *International Business & Economics Research Journal (IBER)*, *8*(11). https://doi.org/10.19030/iber.v8i11.3187

Mobarek, A., & Mollah, S. (2016). Market integration and causality in developed and emerging markets during crisis periods. *Global Stock Market Integration*, 115–134. https://doi.org/10.1057/9781137367549_5

Mobarek, A., & Mollah, S. (2016). Market integration in developed and emerging markets. *Global Stock Market Integration*, 73–97. https://doi.org/10.1057/9781137367549_3

Moran, D. (1999). The Role of the Dow Jones Islamic Market Index in Islamic Finance. In *Proceedings of the Third Harvard University Forum on Islamic Finance: Local Challenges, Global Opportunities* . (pp. 257–258). essay, Cambridge, Massachusetts. Center for Middle Eastern Studies, Harvard University. Retrieved February 12, 2019, from https://ifdb.tridz.in/publication/51624.

Muhammad Hanif, M. H. (2019). Shariah screening process of Capital Markets: An Evaluation of Methodologies. *Journal of King Abdulaziz University Islamic Economics*, *32*(1), 23–42. https://doi.org/10.4197/islec.32-1.2

Mukhopadhyay, B. (2009). Financial Market Integration. *Review of Market Integration*, *1*(1), 37–60. https://doi.org/10.1177/097492920900100103

Mukhopadhyay, B. (2009). Financial Market Integration. *Review of Market Integration*, *1*(1), 37–60. https://doi.org/10.1177/097492920900100103

Naseri, M. (n.d.). Malaysian investors' Perspectives on the integration and co- movement of Islamic stock markets in developed and developing countries. *Handbook of Empirical Research on Islam and Economic Life*, 624–656. https://doi.org/10.4337/9781784710736.00037

Nazlioglu, S., Hammoudeh, S., & Gupta, R. (2015). Volatility transmission between Islamic and conventional equity markets: Evidence from causality-in-variance test. *Applied Economics*, 1–16. https://doi.org/10.1080/00036846.2015.1039705

Nazlioglu, S., Hammoudeh, S., & Gupta, R. (2015). Volatility transmission between Islamic and conventional equity markets: Evidence from causality-in-variance test. *Applied Economics*, 1–16. https://doi.org/10.1080/00036846.2015.1039705

Neaime, S. (2006). Portfolio management and financial market integration of emerging MENA Stock Markets. *Global Stock Markets and Portfolio Management*, 37–53. https://doi.org/10.1057/9780230599338_4

Nepal, R., & Paija, N. (2019). Energy security, electricity, population and economic growth: The case of a developing South Asian resource-rich economy. *Energy Policy*, *132*, 771–781. https://doi.org/10.1016/j.enpol.2019.05.054

Niu, S. (2010). The economic and trade cooperation between ASEAN and the Gulf Cooperation Council. *Journal of Middle Eastern and Islamic Studies (in Asia)*, *4*(4), 82–101. https://doi.org/10.1080/19370679.2010.12023169

Oktav, Ö. Z. (2018). Quo vadis turkey-GCC states relations? A Turkish perspective. *Insight Turkey*, *20*(2). https://doi.org/10.25253/99.2018202.07

Oktav, Ö. Z. (2018). Quo vadis turkey-GCC states relations? A Turkish perspective. *Insight Turkey*, *20*(2, Spring), 107–124. https://doi.org/10.25253/99.2018202.07

Othman, A., Sari, N. M., Alhabshi, S. O., & Mirakhor, A. (2017). Monetary policy and Islamic Finance: Malaysia. *Macroeconomic Policy and Islamic Finance in Malaysia*, 175–237. https://doi.org/10.1057/978-1-137-53159-9_7

Padungsaksawasdi, C., Treepongkaruna, S., & Brooks, R. (2019). Investor attention and stock market activities: New evidence from panel data. *International Journal of Financial Studies*, *7*(2), 30. https://doi.org/10.3390/ijfs7020030

Park, C. Y. (2013). Asian Capital Market Integration: Theory and Evidence. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2282305

Plastun, A., Sibande, X., Gupta, R., & Wohar, M. E. (2020). Price gap anomaly in the US stock market: The whole story. *The North American Journal of Economics and Finance*, *52*, 101177. https://doi.org/10.1016/j.najef.2020.101177

Rahman, A. A., Yahya, M. A., & Nasir, H. M. (2010). Islamic norms for stock screening. *International Journal of Islamic and Middle Eastern Finance and Management*, *3*(3), 228–240. https://doi.org/10.1108/17538391011072426

Ramdhan, N., Yousop, N. M., Ahmad, Z., & Abdullah, N. M. H. (2020). Malaysia Stock Market Integration: The Effect of Leader and Emerging Market. *Journal of Advanced Research in Business and Management Studies*, *2*(1), 1-10. https://www.akademiabaru.com/submit/index.php/arbms/article/view/1181

Rana, S., & Phillips, G. M. (2016). Are U.S. growth and value stocks similarly integrated with the world markets? A test across business cycles. *Applied Economics*, *48*(53), 5168–5185. https://doi.org/10.1080/00036846.2016.1173179

Rehman, M., & Shah, S. (2016). Does bilateral market and financial integration explains international co-movement PATTERNS1. *International Journal of Financial Studies*, *4*(2), 10. https://doi.org/10.3390/ijfs4020010

Selvarajan, S. K., & Ab-Rahim, R. (2020). Financial Integration and economic growth: Should asia emulate Europe? *Journal of Economic Integration*, *35*(1), 191–213. https://doi.org/10.11130/jei.2020.35.1.191

Shi, X., & Yao, L. (2020). Economic integration in Southeast Asia: The case of the ASEAN Power Grid. *Journal of Economic Integration*, *35*(1), 152–171. https://doi.org/10.11130/jei.2020.35.1.152

Smajlbegovic, E. (2018). Regional economic activity and stock returns. *Journal of Financial and Quantitative Analysis*, *54*(3), 1051–1082. https://doi.org/10.1017/s0022109018001126

Stulz, R. M., & Williamson, R. (2003). Culture, openness, and Finance. *Journal of Financial Economics*, *70*(3), 313–349. https://doi.org/10.1016/s0304-405x(03)00173-9

Taghizadeh-Hesary, F., Yoshino, N., Kim, C. J., & Morgan, P. J. (2020). Regional Economic Integration in Asia: Challenges and recommended policies. *Journal of Economic Integration*, *35*(1), 1–9. https://doi.org/10.11130/jei.2020.35.1.1

Tian, Y. (2023). Quantitative Research of Enterprises and Their Leaders' Vision Based on Social Responsibility. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, *8*(4), 35.

Türkcan, K., & Saygılı, H. (2018). Economic integration agreements and the survival of exports. *Journal of Economic Integration*, *33*(1), 1046–1095. https://doi.org/10.11130/jei.2018.33.1.1046

Wang, S., & Guo, Z. (2019). A study on the co-movement and influencing factors of stock markets between China and the other G20 members. *International Journal of Finance & Economics*, *25*(1), 43–62. https://doi.org/10.1002/ijfe.1727

Wu, F. (2020). Stock market integration in east and Southeast Asia: The Role of Global Factors. *International Review of Financial Analysis*, *67*, 101416. https://doi.org/10.1016/j.irfa.2019.101416

Xunpeng Shi, Lixia Yao, 2020, Economic Integration in Southeast Asia: The Case of the ASEAN Power Grid, Journal of Economic Integration Vol. 35, No. 1, March, 152-171, https://doi.org/10.11130/jei.2020.35.1.152

Yangyang Chen, Abhinav Goyal, Madhu Veeraraghavan, and Leon Zolotoy, 2020, Media Coverage and IPO Pricing around the World, Journal of Financial and Quantitative Analysis, Vol. 55, issue 5, 1515-1553, DOI: https://doi.org/10.1017/S0022109019000486

Yao, S., He, H., Chen, S., & Ou, J. (2018). Financial liberalization and cross-border market integration: Evidence from China's stock market. *International Review of Economics & Finance*, *58*, 220–245. https://doi.org/10.1016/j.iref.2018.03.023

Youcef, G., & Adewale, A. A. (2017). Dynamic linkages among Sami nations (Saudi Arabia, Turkey, Malaysia, Indonesia) equity markets. *Journal of Islamic Finance*, *6*(Special Issue), 14–34. https://doi.org/10.12816/0047337

Yu, I. W., Fung, K. P., & Tam, C. S. (2010). Assessing financial market integration in asia – equity markets. *Journal of Banking & Finance*, *34*(12), 2874–2885. https://doi.org/10.1016/j.jbankfin.2010.02.010

Yusup, D. K., Sobana, D. H., & Yulandri, E. (2022). The Development Model of Mini Bank and Business Clinics Laboratory at PTKIN. *International Journal of Professional Business Review*, *7*(4), e0494-e0494.