SHARIAH STOCK EXCHANGE IN ISLAMIC CONFERENCE ORGANIZATION MEMBERS (OIC) IS THERE ANY INTEGRATION?

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ABSTRACT	ARTICLE INFO

This research examines the integration of the Indonesian Islamic Stock Exchange with the Islamic stock exchange in five OIC member countries. In particular ways, Malaysia, Pakistan, Kuwait, Turkey, and Qatar. This order was picked dependent on the world income grouping of the Organization of Islamic Cooperation (OIC). This investigation applies the technique for Vector Autoregressive (VAR)/Vector Error Correction Model (VECM) and day by day, shutting records information spreading over from 2013 to 2018. The outcomes show no causality connections among all Islamic stock exchanges in Malaysia, Pakistan, Kuwait, Turkey, and Qatar, with the Indonesian Islamic stock exchange. Based on cointegration analysis, Malaysia's Islamic stock exchange has a long-term relationship with the Indonesian Islamic stock exchange Indonesia. Furthermore, based on variance decomposition (VD) analysis, Indonesia's Islamic stock market provides the most significant contribution to the Islamic stock market of Pakistan's movement.

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INTRODUCTION

Globalization implies no meaningful regional or territorial distance anymore so that whatever happens and takes place in a place; there is no guarantee that the event or event does not bring influence elsewhere. The development of the process of globalization has increased the level of interdependence not only in trade relations but also in investment, finance, and production factors. One of the main characters of globalization is the depletion of national and regional economic or market activities towards economic activities involving many countries.

(Arsyad, 2015; Thai Hung, 2019) The motivations underlying economic integration can vary, but which often emerges at the beginning of the globalization process, which is characterized by the increasingly liberal trade sector that shifts the role of the autarky economy, is the interest in regions or geographically dependent and contiguous regions. In contrast to economic integration in general, the OIC was formed based on similarity in religious factors, although the economic, ideological, monetary, and financial systems varied greatly. (Razak & Tazwar, 2018) With the full implementation of the Agreement on Trade Preferential System of the Organization of the Islamic Conference (TPS-OIC) in 2012, economic cooperation between OIC countries can increase. There are three main components in the TPS collaboration: the cooperation framework (The Framework Agreement). The Protocol on Preferential Tariff Scheme (PRETAS) and Rules of Origin (RoO). The TPS-OIC cooperation framework came into force in 2002. PRETAS was implemented in February 2010. Furthermore, the agreement on the origin of goods was agreed to begin in August 2012. Deepening the TPS-OIC frame's cooperation framework is expected to be a turning point for building deeper economic cooperation between OIC members(Abidin, Bakar, & Sahlan, 2013).

According to (Hidalgo & Hausmann, 2009; Wongbangpo & Sharma, 2002) two keywords in globalization are interaction and integration, namely the state's economic interaction and its integration level. Economic interactions between countries include trade, production, and financial flows. While integration means that each country's local or national economy is effectively a separate part of a single world economy, a mutually integrated Islamic stock exchange will lead to the emergence of a relationship between one stock exchange and another(Adam & Tweneboah, 2011; Phylaktis & Ravazzolo, 2005). If there is a shock on a stock exchange within a specific period, it will affect the condition of other stock exchanges. It gives foreign investors who want to invest and have the opportunity to diversify their portfolios in various countries' businesses because of the inter-related relationship globally to help investors increase their returns and reduce their risks in their portfolios.

This study's main objective was to analyze the integration in the Islamic stock exchanges of member countries of the Organization of the Islamic Conference (OIC). The choice of this subject is due to several reasons. First, there is no research on the integration of Islamic stock exchanges in OIC member countries. For decades, the Islamic finance industry has a rapid expansion of development, reaching around USD 2 trillion of total assets in 2014. The extraordinary growth added to Islamic financial resistance to the crisis that hit financial markets paid great attention to this type of finance. Third, the OIC member countries' Government has made great efforts to encourage the development of Islamic finance in the region and hopes to be in line with the developing market.

THEORITICAL BACKGROUND

Ehigiamusoe and Lean, (2019) says there are three important things to define financial integration. First, integration does not depend on the financial structure of a particular region. The financial structure includes all intermediaries, institutions, and financial markets and how they relate to each other about the flow of funds from individuals, governments, and companies in the region. Usually, each region develops different financial structures before they financially integrated. Indeed, there is no guarantee that financial integration will lead to an integrated financial structure.

Second, the obstacles to investing activities will not lose due to the occurrence of financial integration. In contrast, financial integration is related to the symmetrical and asymmetrical impacts of the constraints that exist in each of the different regions. Even with the existence of these constraints, some regions can financially integrate as long as these constraints affect symmetrically(Belke & Keil, 2016).

Third, the definition of financial integration separates the financial market's two components, namely investment demand, and supply. Full integration requires uniform access to each bank, trading company, and transaction settlement institution for investors (as demand) and companies (as supply) regardless of their country(Calvi, 2010). Besides, the same access has given, and intact integration requires no discrimination between market players solely based on the region. When a country or region prevents foreign investors' opportunity to invest their capital, the region or country not fully financially integrated.

Arsyad, (2015) states that financial integration marked by removing barriers to cross-border capital flows. Education on capital flows includes direct investment flows, investments in portfolios, cross-country settlement systems, and cross-country banking credit flows. Mubarok, Al Arif, & Mufraini, (2020) added that financial integration is situations are no obstacles or differences between economic agents to invest in the number of capital, based on their location. Sentences show that financial integration will achieve when there is the same market entry point for all economic actors. Belke & Keil, (2016) argues for the benefits of financial integration seen from a country. Profits can show low-risk consumption globally(Abd. Majid, 2018; Kumar & Dhankar, 2017). The positive impact of foreign capital flows on investment and domestic growth, improving macroeconomic policies, and increasing efficiency in line with domestic financial policies' stability with investment by foreign banks (Ehigiamusoe & Lean, 2019; Nguyen & Elisabeta, 2016).

RESEARCH METHODOLOGY

This study's population is all activities that move the daily closing values of sharia stock indexes in Indonesia, Malaysia, Pakistan, Kuwait, Turkey, and Qatar, starting from July 1, 2013, to July 31, 2018. The sample chosen is JII, FBMS, KMI30, DJIMKW, DJIMTR, and QERI. Elections in Indonesia, Malaysia, Pakistan, Kuwait, Turkey, and Qatar based on several factors. First, the stock exchange covers the geographical area that provides the novelty of this research. Second, the stock exchanges chose in this study categorized according to The World Bank Income Grouping level, namely Indonesia and Pakistan, representing the OIC-LMIG, Malaysia, and Turkey countries representing the OIC-UMIG category and finally Qatar and Kuwait representing the OIC-HIG category. The OIC-LIG category not included in the study sample due to Islamic stock exchanges' unavailability in the country concerned. In this study,

the analysis that will used is the analysis of Vector Autoregressive (VAR), Vector Error Correction Model (VECM) and as an analytical tool eviews 9.

RESULT AND DISCUSSION

In this study, the data tested is the closing value data daily index. Hence, a brief analysis of the movement patterns and the closing value of the indexes, which are the variables in this study, will be discussed.

JII closing value movement range from 2nd January 2013 as of 31st August 2018 between 500 and 800. On 20th September 2015, this index recorded the closing value. The lowest was 541.03, and the highest closing value was 798,770 on the 28th of January 2018. The JII average daily closing value is 676,711.

Range of movement of FBMS closing value from 2 July 2013 as of 1 July 2018 is between 10,500 and 14,000. On 24 August 2015, this index recorded the lowest closing value 10,901.9 and the highest closing value of 13,807.2 on 8 January 2018. The FTFBMS average daily closing value is 12,680.43.

Table 1. Stationarity Test Indonesian, Malaysia, Pakistan, Kuwait, Turkey and Qatar Islamic Index

	Level		$1^{ST}Difference$	
Variabel	ADF Statistik	Prob	ADF Statistik	Prob
JII	-3,444905	0,0460	-23,05982	0,000
FBMS	-2,979690	0,1383	-32,07121	0,000
KMI30	-2,557200	0,3004	-30,10601	0,000
DJIMKW	-1,380097	0,8665	-34,100017	0,000
DJIMTR	-1,732314	0,7365	-34,82705	0,000
QERI	-1,210125	0,9072	-30,56351	0,000
5% critical value Mac Kinnon -3,413376				

Source : data processing result 2018

From the results of the stationarity test, the daily closing value of the Islamic stock exchange index above can be seen. At the level of level, only the ADF statistic of JII is higher than $\alpha = 5\%$ critical value so that it can be said to be stationary, while the others are not stationary. Therefore, all indices need to be made the 1st difference process because if one of the stationary variables is at the 1st difference level, then all variables must be stationary at the 1st difference level. After the 1st difference process, the ADF statistic value is higher than $\alpha = 5\%$ critical value, which means that all variables in the stationary Islamic stock exchange index are at the 1st difference.

Granger Causality Test

Table 2. Granger Causality Test Indonesian, Malaysia, Pakistan, Kuwait, Turkey and Qatar Islamic Index

Null Hypothesis:	Obs	F-Statistic	Prob.
FBMS does not Granger Cause JII	1238	0.92802	0.4467
JII does not Granger Cause FBMS		1.84988	0.117
Null Hypothesis:	Obs	F-Statistic	Prob.
KMI30 does not Granger Cause JII	1238	1.33072	0.2564
JII does not Granger Cause KMI30		0.53132	0.7128
Null Hypothesis:	Obs	F-Statistic	Prob.
JII does not Granger Cause DJIMKW	1238	0.62071	0.6478
DJIMKW does not Granger Cause JII		0.18019	0.9487
Null Hypothesis:	Obs	F-Statistic	Prob.
DJIMTR does not Granger Cause JII	1238	2.82355	0.0239
JII does not Granger Cause DJIMTR		0.25123	0.909
Null Hypothesis:	Obs	F-Statistic	Prob.
JII does not Granger Cause QERI	1238	0.54007	0.7063
QERI does not Granger Cause JII		0.45870	0.7661

Source : data processing result 2018

Overall, there is no two-way causality relationship, or it can be said that there is no mutual influence in the OKI member index of the Islamic stock exchange, which is the research variable. A one-way causality relationship can be said that there is no reciprocal relationship (only one variable influencing other variables, but not otherwise). In the Islamic stock exchange index of the six OIC member countries is only owned by the DJIMTR partner with JII. In a one-way causality relationship, the affected variable is the Islamic stock exchange index in Indonesia. Due to the daily value of shares that are influenced by the size of the stock market capitalization so that stocks that have large capitalization have an influence on the index higher than stocks with small capitalization (Arsyad, 2015; Belke & Keil, 2016; Komatsubara, Okimoto, & Tatsumi, 2017).

That means that stocks in the Islamic stock exchange in Indonesia still have a smaller market capitalization compared to other stock exchanges. Furthermore, inter-stock relations that influence each other, are not only caused by the capitalization of the exchanges but due to the strong cooperation between the companies listed on each of these stock exchanges especially in the fields of export and import economics. As we know, so far economic, social and security cooperation in the OKI frame is still relatively traditional and lags behind other blocks of economic cooperation. That can be seen from the low intra-trade portion of OKI with slow growth. The investment movement among OIC countries has not shown significant progress. Several factors that led to low intra-trade within the OIC, namely the low trade associated with services, the lack of trade information between OIC members, high tariff

barriers and non-tariffs. The low economic cooperation among OIC members is exacerbated by the economic system of some OIC countries which are still classified as a closed economy.

Cointegration Johansen Test
Table 3. Cointegration Johansen Test Indonesian Islamic Index with Malaysia, Pakistan, Kuwait, Turkey and Qatar Islamic Index

Cointegration Test FBMS with JII

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.017511	29.29194	25.87211	0.0180
At most 1	0.005996	7.438894	12.51798	0.3010

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.017511	21.85304	19.38704	0.0215
At most 1	0.005996	7.438894	12.51798	0.3010

Cointegration Test DJIMTR with JII

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.008734	13.82767	25.87211	0.6718
At most 1	0.002403	2.976631	12.51798	0.8793

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.008734	10.85104	19.38704	0.5287
At most 1	0.002403	2.976631	12.51798	0.8793

Cointegration Test KMI30 with JII

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.007189	17.13700	25.87211	0.4048
At most 1	0.006616	8.211636	12.51798	0.2349

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.007189	8.925365	19.38704	0.7321
At most 1	0.006616	8.211636	12.51798	0.2349

Cointegration Test QERI with JII

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.007257	11.92318	25.87211	0.8173
At most 1	0.002352	2.913393	12.51798	0.8867

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.007257	9.009791	19.38704	0.7234
At most 1	0.002352	2.913393	12.51798	0.8867

Cointegration Test DJIMKW with JII

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.008740	13.76573	25.87211	0.6769
At most 1	0.002348	2.907291	12.51798	0.8874

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.008740	10.85844	19.38704	0.5280
At most 1	0.002348	2.907291	12.51798	0.8874

Source : data processing result 2018

The cointegration test between sharia stock exchanges shows only FBMS belongs to Malaysia has a long-term cointegration relationship with sharia stock exchanges in Indonesia. Based on the cointegration test results between FBMS and JII, the statistic value and Max-Egen statistic value indicate two significant cointegration ranks at $\alpha = 5\%$. The long term can be caused by the two countries located in the same region, namely Southeast Asia. That is reinforced by the theory expressed by Babecky (2017) "close countries frequently have a similar group of investors in their markets. Therefore, there are influence markets for each other." Also besides, the enactment of the MEA in 2015 caused free trade among ASEAN countries.

Variance Decomposition
Table 4. Variance Decomposition Relationship Indonesian Islamic Index with Malaysia, Pakistan, Kuwait, Turkey and Qatar Islamic Index

Variance Decomposition of DJII:			Variance Decomposition of DJII:			Variance Decomposition of DJII:		
Period	DJII	DFBMS	Period	DJII	DKMI30	Period	DJII	DDJIMKW
1	100.0000	0.000000	1	100.0000	0.000000	1	100.0000	0.000000
2	99.97452	0.025476	2	99.98759	0.012407	2	99.97472	0.025284
3	99.95008	0.049923	3	99.99121	0.008786	3	99.96652	0.033475
4	99.74801	0.251986	4	99.97616	0.023844	4	99.96966	0.030342
5	99.75265	0.247347	5	99.95475	0.045248	5	99.97287	0.027128
6	99.75723	0.242775	6	99.93421	0.065791	6	99.97528	0.024725
7	99.75234	0.247659	7	99.91853	0.081468	7	99.97697	0.023028
8	99.73863	0.261368	8	99.90330	0.096700	8	99.97830	0.021701
9	99.71583	0.284166	9	99.88713	0.112874	9	99.97942	0.020578
10	99.68738	0.312617	10	99.86972	0.130285	10	99.98040	0.019601
Variance Decomposition of DFBMS:			Variance Decomposition of DKMI30:			Variance Decomposition of DDJIMKW:		
Period	DJII	DFBMS	Period	DJII	DKMI30	Period	DJII	DDJIMKW
1	0.023176	99.97682	1	2.90E-05	99.99997	1	0.057314	99.94269
2	0.031059	99.96894	2	0.036730	99.96327	2	0.051795	99.94820
3	0.024877	99.97512	3	0.033622	99.96638	3	0.105346	99.89465
4	0.023714	99.97629	4	0.028441	99.97156	4	0.238200	99.76180
5	0.018624	99.98138	5	0.023260	99.97674	5	0.324622	99.67538
6	0.022736	99.97726	6	0.019459	99.98054	6	0.378280	99.62172
7	0.045590	99.95441	7	0.016823	99.98318	7	0.413225	99.58678
8	0.090490	99.90951	8	0.015276	99.98472	8	0.440777	99.55922
9	0.157523	99.84248	9	0.014819	99.98518	9	0.464061	99.53594
10	0.247464	99.75254	10	0.015424	99.98458	10	0.484206	99.51579
Cholesky Ordering: DJII DFBMS			Cholesky Ordering: DJII DKMI30			Cholesky Ordering: DJII DDJIMKW		
Variance Decomposition of DDJIMTR:			Variance Decomposition of DJII:					

Period	DDJIMTR	DJII	Period	DJII	DQERI
1	100.0000	0.000000	1	100.0000	0.000000
2	99.99952	0.000476	2	99.97841	0.021592
3	99.97157	0.028432	3	99.98492	0.015082
4	99.96719	0.032810	4	99.97230	0.027699
5	99.96624	0.033760	5	99.95709	0.042907
6	99.96594	0.034057	6	99.94872	0.051285
7	99.96483	0.035168	7	99.94369	0.056314
8	99.96344	0.036558	8	99.93975	0.060250
9	99.96195	0.038046	9	99.93694	0.063060
10	99.96047	0.039531	10	99.93489	0.065107

Variance Decomposition of DJII:			Variance Decomposition of DQERI:		
Period	DDJIMTR	DJII	Period	DJII	DQERI
1	0.055215	99.94478	1	0.008478	99.99152
2	0.037261	99.96274	2	0.007269	99.99273
3	0.174880	99.82512	3	0.007512	99.99249
4	0.427122	99.57288	4	0.027312	99.97269
5	0.561150	99.43885	5	0.046589	99.95341
6	0.609917	99.39008	6	0.061813	99.93819
7	0.623874	99.37613	7	0.075884	99.92412
8	0.626159	99.37384	8	0.090316	99.90968
9	0.621479	99.37852	9	0.105039	99.89496
10	0.611203	99.38880	10	0.120199	99.87980
Cholesky Ordering: DDJIMTR DJII			Cholesky Ordering: DDJIMTR DJII		

Source : data processing result 2018

Analysis of Variance Decomposition (VD) shows that in the Islamic stock exchange group, the Malaysian sharia stock exchange (FBMS) gave the most significant contribution of 0.31% to the movement of the Indonesian sharia stock exchange (JII), but this contradicts the contribution made by JII against FBMS of 0.24%. The existence of a bilateral agreement between the IDX and the Malaysian Stock Exchange regarding the trading of several Islamic companies and products made Indonesian investors have the opportunity to trade shares in Malaysia and increasing number of investors in each country. Both Indonesia and Malaysia increasing the welfare and prosperity of the community by expanding investment transactions between countries, removing barriers to international trade, improving the quality of domestic products to lure other countries to provide local products in the region integrated area.

CONCLUSION

Based on the results of testing the hypothesis and referring to the formulation and objectives of the study, the conclusions that can be drawn are as follows:

1. All Islamic stock exchanges to the five-member countries of the OIC (Islamic Cooperation Organization) do not have a two-way causality relationship to the Islamic stock exchanges in Indonesia. The one-way causality is only found in the Turkish sharia stock exchange (DJIMTR) with Indonesia (JII).
2. Islamic stock exchanges in Indonesia, namely the Jakarta Islamic Index (JII) only have a long-term relationship with Islamic stock exchanges in Malaysia, namely FTSE Bursa Malaysia Emas Shariah (FBMS).
3. Islamic stock exchanges in Malaysia, namely FTSE Bursa Malaysia Emas Shariah (FBMS) make the biggest contribution to the movement of Islamic stock exchanges in Indonesia, namely the Jakarta Islamic Index (JII). Meanwhile, the movement of the Islamic stock exchange in Kuwait received the largest contribution from the Indonesian Islamic stock exchange, the Jakarta Islamic Index (JII).

Therefore, based on the three results of the analysis it can be concluded that the Islamic stock exchange integrated with the Islamic stock exchange in Indonesia (JII) is the FTSE Bursa Malaysia Emas Shariah (FBMS).

IMPLICATIONS

Based on the conclusions described, there are several implications:
1. For Investors, this study provides information on the integration of Islamic stock exchanges in six OIC member countries so that they can be taken into consideration in deciding investment policies in companies.
2. For the Government, it is expected that through the government it can give more attention and establish appropriate policies relating to cooperation with the countries of the Organization of the Islamic Conference (OIC)..

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