

Global Financial Crisis and Islamic Capital Market Integration among 5-ASEAN Countries

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Abstract: Islamic Capital Market is important part of Financial System in ASEAN countries especially in the context of AEC. The objective of this paper is to investigate interconnection long run equilibrium of Islamic Capital Market in ASEAN Countries. Using daily closing price for from September 2007 to October 2012, this study examine five Islamic Capital markets in ASEAN namely Indonesia, Malaysia, Philippines, Singapore and Thailand. This study examines on Integration among these Islamic Capital markets by relies a simple correlation test, Granger causality test and co-integration test using error correction model. This research documents some interesting finding. First, Using Johansen estimation technique, there is co-integration between the considered Islamic indices namely; Indonesia, Malaysia, Philippines, Singapore and Thailand. Second, Since the co-integration exists, granger causality test shows that there is three bi-directional causalities namely; between Malaysia Islamic Capital Market and Singapore Islamic Capital Market; between Thailand Islamic Capital Market and Singapore Islamic Capital Market; and between Singapore Islamic Capital Market and Philippines Islamic Capital Market. However, there is a unidirectional between Indonesia Islamic Market (MCIINA) and Malaysia Islamic Market (MCIMY), MCIINA and Philippines Islamic Market (MCIPhil), MCIINA and Thailand Islamic Market (MCITHAI), it implies that MCIINA affects MCIMY, MCIPhil, and MCITHAI but not vice versa. Third, based on VECM suggest that all Islamic indexes are inter-related in the long run that can be explained due to the similarity of structure bring about by its stock as required by shariah in the process stock screening.

Keywords: Islamic Capital Market, Integration, Asean Economic Community, Diversification, Arbitrage.

Introduction

Country member of the Association of Southeast Asian Nations (ASEAN) are grouping from the most to the least developed based on the strength, efficiency, and depth of their financial systems. Development of the financial sector has been an important policy goal of most member-states at least since the mid-1980s, but the urgency with which ASEAN governments have focused on capital-market reform has increased significantly with the advent of the Asian Crisis in July 1997. Currently, ASEAN leaders place financial reform among their most important and pressing economic policy goals (Plummer and Click, 2003).

According to Plummer and Click (2003), financial system in ASEAN countries are mainly based on banking sector. In the spirit of ASEAN Economics Community it is very crucial to the ASEAN to diversify and improve the role of the other financial sector, such as Islamic capital market. It is understandable, compared to some developed countries the role of capital market is very significant. Therefore, in term of ASEAN Economic Community, the integration of Islamic Capital Market is very important to ensure the free flows of capital among ASEAN members. The ultimate goal of capital market integration is to reduce uncertainty and

the investors around ASEAN may predict the future of assets movement of ASEAN market returns optimally (Suryanta, 2011).

In addition, capital markets integration is theoretically will allow for greater cross border access to investors and issuers, and help broaden the investor base and range of products, thereby strengthening domestic capital markets and providing liquidity, scale, capacity and ultimately put ASEAN in a better position to compete with more developed capital markets. According to Ong Chong Tee (2005) there are two main reasons behind the Capital Market Integration in ASEAN. Firstly, the economic links between ASEAN countries are strong and can be stronger through greater market integration. Secondly, in the development of capital markets, size does matter - be it for greater efficiency from economies of scale, or for stability through diversity of players or for the market's ability to attract the attention of global investors and fund raisers. Despite these benefits, increasing market integration or reducing market segmentation diminishes the ability of governments to achieve independent economic policies (Swanson, 1987). Financial integration may also have impact upon risk return relationship between assets (Ragunathan, 1999), which is pertinent in the issue of portfolio selections and asset pricing.

Islamic capital market in ASEAN country is part of the capital market which play significant role in economy, at least in the context of its quantity. Islamic capital market has been one of the most rapidly growing in the Islamic financial market that contributes significantly to the industry (Kassim, 2010). Similar to the conventional equity market in ASEAN, simple understanding of the nature of integration among the Islamic capital markets in ASEAN has several implications for market strategizing and capital budgeting by the investors as well as planning and supervision by the policymakers (Kassim, 2010). Siddiqi (2008) estimated that the market capitalization of Islamic equity market is around \$4.34 trillion at the end 2008. Globally there are more than 500 shariah compliance fund available and predicted to be 1000 at the end of 2010 (Islamic Finance News, 2008).

Among the countries of Southeast Asia, Malaysia has emerged as a major global force in Islamic finance innovation and expertise, and Singapore is fashioning itself as a sophisticated international provider of Islamic finance wealth and asset management services. With the world's largest Muslim population, Indonesia has the largest market that is slowly being tapped by foreign financial institutions. Moreover, Brunei Darussalam and Thailand are the member ASEAN that potentially will contribute significantly in the future of Islamic capital market in ASEAN.

In Malaysia the market capitalization of Islamic capital market is MYR756.1 Billion in 2010, and predicted to be about MYR1,551.1 Billion at the end of 2020. Sukuk in Malaysia is around RM 294.0Billion in 2010 and predicted to RM1,331.5 billion at the end 2020 (Security Commission, 2010). Indonesia as the most populous Muslim countries also has good progress in the development of Islamic capital market. Statistically, Market capitalization of Islamic equity market is at Rp. 2.486, Trillion from total market Rp.4.027.Trillion in September 2012. Sukuk market in Indonesia has outstanding value around Rp 6.579, Billion in 2012.

Literature Review

Islamic Capital Market

The issue of development of Islamic capital market was not separate from the issue of development of capital market in general that played a vital role in attracting savings and channelling them for the productive purposes (Salman, 2008). In addition, Islamic capital market is also an integral system with the Islamic economic which is its main objective is to realize the objective of Shariah.

The Shariah objectives or *maqasidussyariah* are the objectives and the rationale of the Shariah. A comprehensive and careful examination of the Shariah's rulings entails an

understanding that the Shariah aims at protecting and preserving *maslahah* in all aspects and segments of life. Many Shariah texts state clearly the reasoning behind certain Shariah rulings, suggesting that every ruling in Shariah comes with a purpose, namely, to benefit the mukallaf. For example, when the Qur'an prescribes *qishos* (retaliation), it speaks of the rationale of it, which applies retaliation to prevent further killing "There is life for you in *qishos*".

According to Al-Ghazzali (1937) and Shatibi (1388), the objective of the Shariah is to promote the well-being of all mankind, which lies in safeguarding their faith (*din*), their human self (*nafs*), their intellect (*aql*), their posterity (*nasl*), and their wealth (*maal*). Whatever ensures the safeguard of these five, serve public interest and is desirable. Therefore, the *maqosidassyariah* is created, which has the *siyasahsyariah* that is very valuable in promoting the objectives of syariah.

Many Islamic values and norms facilitate provision of opportunity to all, especially to the less advantaged sections of society. Islamic values emphasized that everybody should receive an equal treatment irrespective of his race, colour, or gender (Iqbal, 2000). It means that in Islamic economic concept everybody has same opportunity to obtain the resource, do difference among them. Another important Islamic principle having implications for the provision of opportunities is the elimination of interest. By prohibiting interest the Islamic system removes the disparities. It also provides greater opportunities for the poor to have access to credit.

Islamic capital market can be defined as the capital market that implements the principles of Islamic law in business activities which does not involve things prohibited by the Islamic Law such as usury, gambling, speculation, etc.. Islamic capital market is important to develop Islamic finance in the world. In the Islamic capital market, all instruments should be approved by Shariah advisory council. In classifying these securities, the Shariah Advisory will collect information to decide all securities. The Shariah advisory gathered information of the companies from various sources, such as company annual financial reports, company responses to survey forms and through inquiries made to the respective company's management.

The Shariah advisory has applied a standard criterion in focusing on the activities of the companies listed like in Jakarta Composite Index. As such, subject to certain conditions, companies whose activities are not contrary to the Shariah principles will be classified as Shariah compliance security. The companies will be classified as Shariah non-compliant securities if they are involved in the following core activities:

- a) Financial services based on riba (interest);
- b) Gambling and gaming;
- c) Manufacture or sale of non-halal products or related products;
- d) Conventional insurance;
- e) Entertainment activities which are non-permissible according to Shariah;
- f) Manufacture or sale of tobacco-based products or related products;
- g) Stock broking or share trading in Shariah non-compliant securities;
- h) Other activities deemed as non-permissible according to Shariah.

In addition, Sharia investment principles do not allow investment in companies deriving significant income from interest or companies that have excessive leverage. MSCI uses the following three financial ratios to screen for these companies (MSCI, 2011):

- a) Total debt over total assets
- b) Sum of a company's cash and interest-bearing securities over total assets
- c) Sum of a company's accounts receivables and cash over total assets

None of the financial ratios may exceed 33.33%. Securities will be considered non-compliant with respect to financial screening if any of the financial ratios exceeds 33.33%. In

order to reduce index turnover resulting from financial screening, a lower threshold of 30% will be used in determining new inclusions to the Islamic Indices. A security that is currently not a constituent of the MSCI Islamic Indices will be considered compliant with respect to financial screening only if all three financial ratios do not exceed 30%.

Integration among Islamic Capital Market

Theoretically, a portfolio should be well diversified to maximize potential risk adjusted performance. At a given of two individual stock markets that significantly independent, it will provide a diversification benefit to the international investors. Otherwise, integrated stock markets will increase the efficiency of individual stock market and it reduces the individual event risk at a cost of taking away the diversification benefit of international investment (Siskawati, 2011).

Islamic capital market integration concept is quite significant topics which has been discussed by many economist. This is caused by the increase of issue of ASEAN economic community (AEC) that require the integration in financial sector including banking, bond market, capital market etc. Therefore, as part of capital market, Islamic capital market also crucial to be discussed in order to support the achievement of AEC in 2015.

Islamic capital market integration has some benefits as same as conventional counterpart. However, since this market has specifics characteristics compared to conventional as explained above, Islamic capital market will provide investment instrument which is based on shariah. Therefore, in this market, Muslim investor can invest without doubt that the stocks are shariah compliance. It can attract many investor, and as result the improvement of the ASEAN society.

There are many studies conducted about capital market integration. Majid et al (2008) studied the integration among ASEAN- 5 emerging stock markets and their interdependencies from the US and Japan. They use a two-step estimation, cointegration and Generalized Method of Moments (GMM). The data obtained is closing daily stock indices, period of study from 1 January 1988 to 31 December 2006. They found that ASEAN-5 (i.e Malaysia, Thailand, Indonesia, The Philippines, and Singapore) stock markets are moving towards more integration among themselves or with the US and Japan, especially after financial crisis 1997. Furthermore, they also found the Granger causal relations among the market in the region kept changing over the period.

Kassim (2010) conducted study about the impact of financial crisis on the Islamic stock integration. This study found that Islamic capital markets are not spared from the global financial crisis and all Islamic capital market are affected by financial crisis. In addition, this study also found that Islamic capital market will be more integrated during the period of crisis rather than non-crisis periods.

Data and Methodology

This study uses daily closing price for each index from September 2007 to October 2012, a total of 1,332 observations. The sample of this research consist of five Islamic Indexes in ASEAN namely Indonesia, Malaysia, Philippines, Singapore and Thailand. Actually, there are many Islamic indexes in ASEAN countries, but this study use MCI Islamic Index due to in synchronizing the data. The daily closing price data of the five indices is obtained from Bloomberg. The data considered only for those days where markets were open in all the market. Daily data has been used in order to capture potential interactions, for example, impulse responses, because a month or even a week may be long enough to obscure interactions that may last only a few days (Cotter, 2004).

The first step of this study will be focus on correlation test. Analysis of correlation provides a commonly used preliminary technique as adopted by few researchers in the earlier studies. Ng (2000), Hashmi and Liu (2001) and Sabri (2002) conducted the analysis of

correlation to reveal the link between the rates of changes in the Asian stock indices. Other study by King and Wadhwani (1990) used cross-market correlation to identify whether there is any stock market correlation between the United States, the United Kingdom, and Japan. Correlation analysis only measures the degree of linear association between two variables hence provides little insight on the dynamic linkages and causality between stock markets. Therefore, we extend the analysis of stock market integration by employing Granger Causality test.

Research Finding

Descriptive Statistics

The figure 1 describes the movement of the indices of five Islamic capital markets in ASEAN countries namely Indonesia Islamic Index, Malaysia Islamic Index, Philippines Islamic Index, Singapore Islamic Index and Thailand Islamic Index. That figure shows that the five Islamic Indexes in ASEAN were moving in same trend from 2007 to 2012. The trend of Indices decreased from 2007 to 2008 due to it is related to the financial crisis in 2008. In addition, the indices also has upward trend from 2009 to 2012 with the small volatility during the observed periods.

Figure 1. Movement of the Indices in the Observed Period

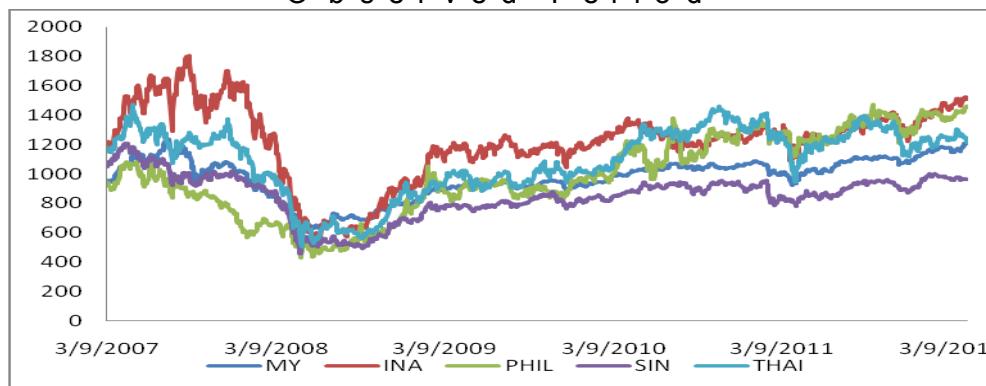


Table 2 shows that the highest correlation are happen between Singapore Islamic index and Thailand Islamic Index which the coefficient of correlation is around 0.537, Indonesia and Singapore at 0.484 and between Indonesia and Thailand which around 0.458. In overall, Singapore Islamic index was has a medium correlation with all Islamic indexes in ASEAN except Philippines Islamic Index that low correlation around 0.282.

Table 2. Coefficient Correlation of Islamic Stock Index in ASEAN

	MCIIINA	MCIMY	MCIPHIL	MCISING	MCITHAI
MCIIINA	1.000000				
MCIMY	0.421015	1.000000			
MCIPHIL	0.275930	0.298420	1.000000		
MCISING	0.483665	0.428683	0.282126	1.000000	
MCITHAI	0.457853	0.398434	0.270250	0.537155	1.000000

Moreover, Malaysia Islamic Indexes also has a medium correlation with Singapore Index, Indonesia Index and Thailand Index. In contrast, the lowest correlation of Malaysia Market was happens with Philippines index. Overall, Philippines Islamic Index was the lowest correlation with all other Islamic indexes in ASEAN. In contrast, Singapore Islamic Index has the highest correlation with the other market.

Augmented Dickey Fuller Test (ADF)

Table 3 gives the ADF test results. First, we fail to reject the null hypothesis at level which contains the unit root in each variable. However, once we take the first difference, we reject the null hypothesis at 1% and conclude that all the series are stationary and integrated in the same order, namely I(1).

Table 3. Augmented Dickey Fuller (ADF) Test

	Variable	Coefficient	Std. Error	t-Statistic	Prob.
At Level	MCIIND(-1)	-0.003786	0.002541	-1.489993	0.1365
	MCIMY(-1)	-0.001124	0.00182	-0.617515	0.537
	MCIPHIL(-1)	-0.001141	0.001997	-0.571292	0.5679
	MCISIN(-1)	-0.003408	0.002151	-1.584375	0.1133
	MCITHAI(-1)	-0.003552	0.002307	-1.5399	0.1238
1 st Difference	D(MCIIND(-1))	-0.943128	0.027397	-34.4251	0.0000
	D(MCIMY(-1))	-0.924746	0.037421	-24.71185	0.0000
	D(MCIPHIL(-1))	-1.055045	0.03878	-27.2062	0.0000
	D(MCISIN(-1))	-1.014809	0.039665	-25.58479	0.0000
	D(MCITHAI(-1))	-0.999564	0.059064	-16.92334	0.0000

Since we have confirmed that the data is stationary at the same order, then we can investigate: (1) causality among the stock markets applying to the Granger methodology (2) interconnection among the variables by perform cointegration methodology, (2) short run and long run fluctuations in stock markets via vector error correction model (VECM).

Angle Granger Test

The Granger Causality test is conducted to investigate direction of causality between Indonesia Islamic Index, Malaysia Islamic Index, Philippines Islamic Index, Singapore Islamic Index and Thailand Islamic Index. Table 4 below describes the F statistics from the granger causality test.

With the level of significance at 5%, the F statistics result shows that there is three bi-directional causalities namely; between Malaysia Islamic Stock Market and Singapore Islamic Stock Market; between Thailand Islamic Stock Market and Singapore Islamic Stock Market; and between Singapore Islamic Stock Market and Philippines Islamic Stock Market. Whereas there is a unidirectional result between Indonesia Islamic Market (MCIINA) and Malaysia Islamic Stock Market (MCIMY), MCIINA and Philippines Islamic Stock Market (MCIPhil),

MCIINA and Thailand Islamic Stock Market (MCITHAI), it implies that MCIINA affects MCIMY, MCIPhil, and MCITHAI but not vice versa.

In addition, there is also an unidirectional between Singapore market and Indonesia market, Malaysia market and Philippines market, Thailand market and Malaysia Market, and Thailand Islamic Market and Philippines Islamic Stock Market, but all are not vice versa.

Table 4. Granger Causality Test Result

Null Hypothesis:	Obs	F-Statistic	Probability
MCIMY does not Granger Cause MCIINA	1328	0.08233	0.92097
MCIINA does not Granger Cause MCIMY		34.7908	1.9E-15
MCIPHIL does not Granger Cause MCIINA	1328	2.33020	0.09768
MCIINA does not Granger Cause MCIPHIL		6.09470	0.00232
MCISING does not Granger Cause MCIINA	1328	6.83687	0.00111
MCIINA does not Granger Cause MCISING		0.10694	0.89859
MCITHAI does not Granger Cause MCIINA	1328	1.96596	0.14043
MCIINA does not Granger Cause MCITHAI		9.16175	0.00011
MCIPHIL does not Granger Cause MCIMY	1328	2.62863	0.07255
MCIMY does not Granger Cause MCIPHIL		3.51211	0.03011
MCISING does not Granger Cause MCIMY	1328	39.2566	0.00000
MCIMY does not Granger Cause MCISING		6.84438	0.00110
MCITHAI does not Granger Cause MCIMY	1328	24.0143	5.7E-11
MCIMY does not Granger Cause MCITHAI		0.56241	0.56997
MCISING does not Granger Cause MCIPHIL	1328	31.4142	4.7E-14
MCIPHIL does not Granger Cause MCISING		3.51741	0.02995
MCITHAI does not Granger Cause MCIPHIL	1328	7.33675	0.00068
MCIPHIL does not Granger Cause MCITHAI		1.72078	0.17933
MCITHAI does not Granger Cause MCISING	1328	3.53960	0.02930
MCISING does not Granger Cause MCITHAI		6.40662	0.00170

Cointegration Test

Table 5 describes that there is a cointegration among the Islamic markets index in ASEAN. The null hypothesis of no cointegration ($r = 0$), is rejected at 5% and 1% level because the trace statistics ($\lambda=171.06808$) exceeds the critical value 1% ($\lambda =6.51$), and critical value 5% ($\lambda=3.84$). thus, it conclude that there is one long run relationship among the Islamic capital market namely Indonesia Islamic Stock Market, MCIMY, MCIPhil, MCISing and MCITHAI. Trace test indicates 5 cointegrating equation(s) at both 5% and 1% levels.

Table 5. Johansen Test of Cointegration

Hypothesized		Trace	5 Percent	1 Percent
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Critical Value
None **	0.214722	1208.767	59.46	66.52
At most 1 **	0.179505	888.7325	39.89	45.58
At most 2 **	0.162498	626.7827	24.31	29.75
At most 3 **	0.153690	391.9964	12.53	16.31
At most 4 **	0.121202	171.0608	3.84	6.51

*(**) denotes rejection of the hypothesis at the 5%(1%) level

Trace test indicates 5 cointegrating equation(s) at both 5% and 1% levels

Vector Error Correction Model (VECM)

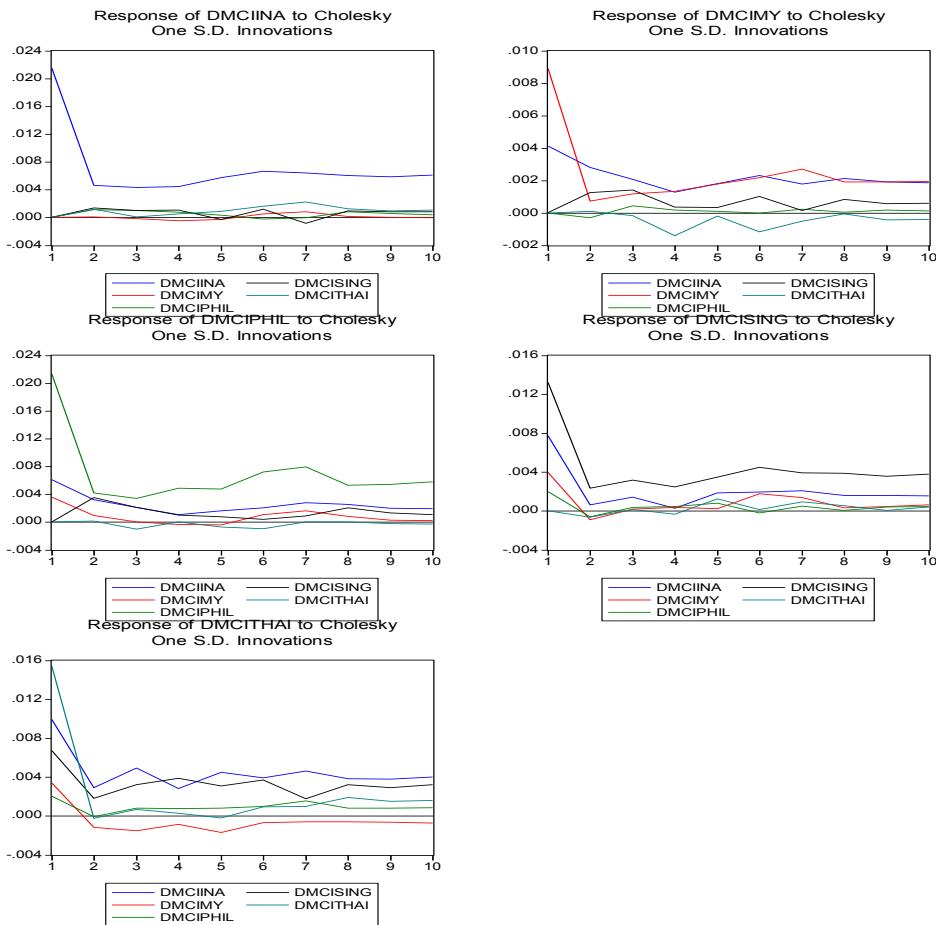
If it has been proved that there is a cointegration among the Islamic Stock market indexes namely; Indonesia, Malaysia, Philippines, Singapore and Thailand. Next, it can be checked the price differential among the market index based on VECM. It is useful to capture both the short-run dynamic and long-run relationships between the stock indices.

Table 6. Vector Error Correction Model (VECM)

Error Correction:	D(DMCIIINA)	D(DMCIMY)	D(DMCIPHIL)	D(DMCISING)	D(DMCITHAI)
CointEq1	-0.185652 (0.05669) [-3.27489]	0.140063 (0.02586)* [5.41611]	0.110743 (0.05927) [1.86836]	-0.040822 (0.04201)* [-0.97182]	0.640510 (0.05250) [12.1992]
D(DMCIIINA(-5))	-0.084339 (0.03474)* [-2.42764]	0.023439 (0.01585)* [1.47896]	-0.004737 (0.03632)* [-0.13041]	0.026519 (0.02574)* [1.03018]	-0.091712 (0.03218)* [-2.85033]
D(DMCIMY(-5))	-0.184841 (0.06690) [-2.76301]	-0.200183 (0.03052)* [-6.55962]	-0.072967 (0.06995) [-1.04318]	-0.123625 (0.04957)* [-2.49392]	-0.046778 (0.06196) [-0.75498]
D(DMCIPHIL(-1))	0.061387 (0.02870)* [2.13872]	-0.040650 (0.01309)* [-3.10460]	-0.841130 (0.03001)* [-28.0278]	-0.036589 (0.02127)* [-1.72034]	-0.094030 (0.02658)* [-3.53715]
D(DMCISING(-5))	0.193194 (0.04815)* [4.01210]	0.047015 (0.02197)* [2.14032]	0.084218 (0.05035) [1.67276]	-0.066018 (0.03568)* [-1.85024]	0.059171 (0.04460)* [1.32678]
D(DMCITHAI(-5))	-0.092462 (0.03785)* [-2.44290]	0.029730 (0.01727)* [1.72189]	0.008378 (0.03957)* [0.21171]	-0.036205 (0.02805)* [-1.29094]	0.004148 (0.03505)* [0.11834]

Table 6 shows the VECM results. The optimum lag length which is 5, follows the AIC and SIC. Based on the result, there is a short-run causality between Indonesia Islamic stock market and all other Islamic index except Malaysia. In addition same pattern also happens for Islamic stock of Thailand which has short-run causality with all Islamic indexes except with Malaysia Islamic Index. However, both Malaysia Islamic Index and Singapore Islamic Index have short-run causality with all other Islamic market in ASEAN. Moreover, in case of Philippines, the Islamic stock market has short-run causality with Indonesia and Thailand, but doesn't have causality with Malaysia Islamic index and Singapore Islamic index.

The coefficient of the error term (ECT) measures the speed of correction to the long run equilibrium. For Malaysia Islamic Stock Market (MCIMY), the coefficient of ECT is positive and significant. In addition, for Singapore Islamic Stock Market (MCISING) the coefficient of ECT is negative and significant. It is meaning that disequilibrium in the short run will be corrected by Malaysia Islamic Index at 14%, while Singapore Islamic Index short run disequilibrium will be corrected at -4%.

Figure 2. Impulse Response Function Test

The impulse response function has related to the mechanism of the regional transmission of capital market movements (Maghyereh, 2006). The speed with which innovations in a particular market are transmitted to the other markets in the system indicate the responsiveness of markets and the efficiency with which 'new information' or innovation is transmitted among markets. In another word, 'new information or innovation' can be called as 'a shock' (Suryanta, 2011).

Figure 1 is composed of vertical and horizontal axis. The vertical axis is percentages points and the horizontal axis is period. The period will be 10 periods that each period consist of 1328-days divided by 10 periods. So each period in this term is 132-day steps ahead. The figure 2 presents that there is shock response of All Islamic capital markets for the changing of other market. The shock response happens during two periods namely 254 Days. After that the response is lower fluctuate till the periods 8, then stable after period 8.

Conclusion

Using Johansen estimation technique, this paper finds that there is cointegration between the considered Islamic indices. The series in each Islamic market (Indonesia, Malaysia, Philippines, Singapore and Thailand) will tend to trend together in the long term. It implies that investors who diversified their portfolio investment in Syariah compliant stocks they could gain limited benefits during the period of study. Generally speaking, the similar trend of Islamic

stock market in ASEAN will reduce the chance for investor to arbitrage, and speculate for looking a profit in the long term.

Since the cointegration exists, theoretically there must be Granger causality at least one (or bidirectional) result, which implies that there is a short run relationship and causality among the market index. Granger causality test shows that there is there is three bi-directional causalities namely; between Malaysia Islamic Stock Market and Singapore Islamic Stock Market; and between Thailand Islamic Stock Market and Singapore Islamic Stock Market; and between Singapore Islamic Stock Market and Philippines Islamic Stock Market. Whereas there is a unidirectional result between Indonesia Islamic Market (MCIINA) and Malaysia Islamic Stock Market (MCIMY), MCIINA and Philippines Islamic Stock Market (MCIPhil), MCIINA and Thailand Islamic Stock Market (MCITHAI), it implies that MCIINA affects MCIMY, MCIPhil, and MCITHAI but not vice versa.

Further analysis based on VECM analysis on the nature of integration of Islamic stock index among five countries suggest that all Islamic indexes are inter-related in the long run that can be explained due to the similarity of structure bring about by its stock as required by shariah in the process stock screening. Despite long run integration, there is also some opportunity to diversify a portfolio among countries. In particular, Indonesia Islamic Market is not affected by Malaysia market and Philippines Islamic stock market has short-run causality with Indonesia and Thailand, but doesn't have causality with Malaysia Islamic index and Singapore Islamic index.

This study will has two main implications especially in the term of portfolio diversification and policy maker. First, since the Islamic capital market is integrated each other in ASEAN countries, there are limited diversification opportunity for the investor who wants to gain benefit especially in the long-run. However, in the short run there is still room for the investor to diversify their portfolio since not all Islamic capital markets are affecting each other in the short run. Second, with the fact that Islamic capital market have been integrated especially in long-run it indicates that Islamic capital market can support the concept of ASEAN Economic Community which is require free flow of capital in ASEAN countries. In addition, since Islamic capital markets are integrated in ASEAN, it is crucial how the policy maker take macroeconomic stabilization policy to face the global economic condition. They can coordinate each other in order to reduce the impact of impact of financial fluctuation.

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