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Sharia Banks Integration and Diversification in Asian and Midlle East Countries

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Abstract: The growth of Sharia Banking in Indonesia shows that Sharia banking in Indonesia is not only an international hub for Sharia banking in other regions but also as a place for investors to diversify investment portfolios other than conventional banking. The certainty of Sharia banking in term of stability makes Sharia Banking in Indonesia connected to one another. However, opportunities for portfolio diversification to Sharia banks in this case; Indonesia, Malaysia, India, Qatar, Bahrain and Japan are in questioned on whether there is integration between Sharia banking in those region and whether there is a possibility of Diversification of Sharia banking Portfolios in the region. In this manner the study is analysed on 25 banks' data across selected countries. In the present study, ROA (Return on Assets) and ROE (Return on Equity) are used as measure of performance of diversification of banks. The number of credits and the amount of credits that Sharia banks let borrowers' use are employed as control variables. According to the result of the analysis showed Indonesia Sharia banks Integration with another Sharia banks in selected countries are varied based the geographical proximity and bilateral trading relation with selected countries.

Keywords: *Sharia* Banking, Integration, Portfolio Diversification, Risk and Return, Opportunities

Introduction

The nature of integration among banks conveys significant information for effective market diversification. First integration of banks essentially indicates the efficiency of the financial markets. In efficient banks, generally, bank integration will increase, since the movement of information between countries is higher due to the elimination of barrier such as prohibition of investing for foreign investor or improvement of trading facility. In the context of portfolio diversification, assets with similar expected outcomes because of exposure to the same risk will offer no diversified benefits as bank performance tends to be

similar. In the concept of return on risk, the benefits will be reduced if all sharia banks are fully integrated with each other even though each investor can increase back or reduce risk and implement mixing strategies (Karim, 2010).

In the implementation, fully integrated *Sharia* banks are not prohibiting investor for having their fund place in another *Sharia* banks in another region, since investor always seeks for portfolio that offering higher return and lower risk where the chance for having the exposure are quite minimal in their own countries, thus placing fund in another countries are best preferences. In addition, gains from international portfolio diversification appear to be largest for countries with high country risk, since Indonesia is a country with high profile risk, thus making other differences across countries, such as size of of the banking sector, and trade openness does not support to explain the differences in the benefit of international portfolio (Yousef, 2012).

For Indonesia *Sharia* banks, several factor influences integration with other *Sharia* banks, such as; number of banks, fixed *Sharia* regulation, separation of rules and system between the conventional and *Sharia* banks and the elimination of transaction cost. For Indonesia that considered as a country with a high risk profile creates the growth of *Sharia* banks becomes dependable to the volatility of risk. Gharar can be interpreted as a risk in sharia related to uncertainty, volatility or losses received by investors of Sharia banks. This causes sharia banks to be less integrated with conventional banks. That impacts the integration of Sharia banks between countries (Chapra, 2007)

In international concept, investment diversification through banking sector faced several constraint particularly the one that implemented by local government, the constraint would also apply to *Sharia* banks since this institution are in the same environment, however since Sharia Bank has the advantage of offering the stability of investors and defending against the crisis. In the financial industry, sharia banks become another preference to other similar products. The strength of Islamic financial industry toward crisis leads *Sharia* banks becoming preferable choice for investor to diversifyy investment portfolio. Malaysia, Egypt, Pakistan, Saudi Arabia and Sudan are pioneering countries for the development of *Sharia* Banking. Indonesia, Middle East, Canada and US provide platform and contribute to the diversification of Islamic banking product. Although, there is a fundamental difference between sharia and conventional banks especially in terms of capital and principles, essentially the implementation of Sharia banks is capable of replicating useful and non contradictory functions of conventional banks as well.

However, with recent rapid development of Islamic financial industry particularly *Sharia* banks, it does not necessarily attracts the attention to research about *Sharia* banks integration and portfolio diversification, while integration in *Sharia* banks is essential to indicate level efficiency and transparency behaviour of *Sharia* banks. Therefore, the integration and portfolio diversification in *Sharia* banks acted as reflection of all available information and as such, are consistent with the economic fundamentals (Beechey *et al.*, 2000). In the context of banks integration, integrated banks have similar expected return

due to the same risk exposure. Integrated *Sharia* banks suggesting that these banks offer no diversification benefits as banks performances tend to perform similar. In the framework of the risk-back, investors can increase back; reduce the risk or both, by having a mixture of investments in sharia banks that return uncorrelated. Potential portfolio diversification benefits that the investor can obtain are demonstrated by the level of integration between Sharia banks.

The measurement of banking integration is important in asymmetric information. In terms of asymmetric information, banks that operate in efficient market must reflect the real condition of banks incorporated in the region. Meanwhile, efficiency information believed to be the main factor that can be used in answering the problem of integration in *Sharia* banking. *Sharia* banking efficiency refers to the conditions under which *Sharia* banking operates fully reflects all available information. The process of creating *Sharia* banking integration begins with a screening process, a fair trading system and transparent information to all investors who invest their funds in *Sharia* banking.

Despite numerous studies that examining banks integration among developed and emerging markets however only few studies explore the issue of *Sharia* Banks and portfolio diversification in Islamic financial institutions particularly in the *Sharia* banks (Karim, 2010; Yousoef, 2012) Rapid growth of Indonesia *Sharia* banks proves that *Sharia* compliances in Indonesia potentially able to become international hub for *Sharia* compliances but also as a place for investor to diversified their portfolio rather than investing in domestic conventional banks. The Bank of *Sharia* stability ensures that the screening process makes Bank *Sharia* build up in several countries around the world. However, the opportunity to diversify the portfolio to other sharia banks in the world is lacking because of the question of whether the advantages among the countries integrated with each other in this case Indonesia, Malaysia, Qatar Bahrain and Japan since the selected countries are concern about the development of Shariah principle and have implemented the concept in their banking industry.

This research is very important to conduct because it will provide special treatment for *Sharia* banks integration on one hand and realize the core concepts of information efficiency and deciding best concepts for future bank integration to achieve efficient *Sharia* banks in terms of fairness, transparency, protection to investors and reduce systematic risk. Previous reserach that author have mention above only discussing the implementation of *Sharia* concept in banking while further research needed to bridging the concept with reality particularly relates with dual banking systmen in Indonesia. The similarity of concepts between *Sharia* principle and banking integration makes these two concepts interconnected to be tested. Investors who invest in *Sharia* banking seek investments that provide stability, transparency, and fairness. However, investors do not have similar information since information is dynamic and moves randomly. On the other hand, efficient information concept seeks to provide information that is available to investors

freely and transparently by testing the predictability of *Sharia* banks returns which creating a gap between investor and institutions that needs to be minimize.

Literature Review

The integration of *Shari'a* banks also described in the solidarity and brotherhood in Islam. Chapra (2001) asserted that the apparent disparities in terms of nationality, race, creed and color are artificial and have no place in Islam. The holy Quran dearly points that human beings were created as one nation (ummah) but become divided because of their differences (*Al-Quran* 10;19), Although the integration of economy is the foundation of *Shari'ah* economic system, but in the implementation the integration among *Shari'ah* banks is in question.

The removal of restriction on capital flow, floating exchange rate, improve communications system and new instruments are all factors that have contributed to the process of integration (Nordel and Stark, 2008). Other factor that contributed to the process of integration is globalization (Goeltom, 2008), globalization has been major factor in influencing the movement and correlation between banks in one country to the others. Globalization Bank has more support for the integration and correlation between two or more countries within the time period of capital flow flexibility. Regional efficiency of Sharia banks will occur when the rules against the formation of bilateral organisations are strengthened and supervision of frameworks is more empowered.

Information efficiency is an absolute factor to form transparant *Sharia* banks through accurate availability of information. One way to make sure regional market efficiency is providing information dissemination in each countries to ensured that capital flow allocated into projects that resulting into highest expected return with necessary adjustment for risk, this process will creates efficient pricing mechanism, economy's savings and investment allocated efficiently. Hence not only that regional efficient banks provides opportunities to engage in profitable trading activities on a continuous basis but also creating a better platform for country integration and correlation with banks in another part of world (Cooray and Wickremasinghe, 2007).

Furthermore, one country that implementing open foreign investment policy will benefit from the integration of banks, since the level of bank integration will influence the level of benefits or profit of international investment, moreover bank integration between countries has important consequences in terms of return predictability, portfolio diversification, asset allocation, economics of scale and scope and long term gain (Kim and Singal, 2000). The benefits of improving inter-state Bank integration is to provide the ability to reduce capital costs, increase investment opportunities for local and foreign investors, but also lead to significant welfare gains from savings Higher and international share risks or diversify through the possibility of integration.

Diversification is the balancing act in which the tradeoffs between risk and return are adjusted in the light of the investor risk tolerance (Bank Investment Consultant 2006 ; 37). This statement also refer to the modern portfolio theory that saying "do not put all of your eggs in the same basket" where in the implementation, investor should diversify their portfolio for a better diversified risk. This theory developed by Harry Markowitz explains that investing in a diversified asset allows investors to diversify portfolios so that they can reduce the volatility of the entire portfolio (Markowitz, 1959).

In order to minimize risk and increasing profit opportunities, more investors seek to diversify their portfolio to international territory. International portfolio makes it possible to expand efficient frontier and reduce systematic risk level below domestic securities. Ming Yuan (2007) has explained the benefits of international diversification can expand its efficient borders and mitigate a systematic level of risk under domestic securities only. The reason is that structural and cyclical differences throughout the economy make it possible risk reduction benefits. If one of the financial markets is doing worse than expected the possibility that other financial markets will do better than expectations, then the risk is reduced and losses are offset.

Several studies have been conducted to analyze the nature of integration and correlation among *Shari'ah* financial institutions within a particular territorial or countries. For Asia region, Majid *et al.* (2007) focusing on eight *Shari'ah* ccompliances: Turkey, Egypt, Oman and Kuwait (representing the MENA region), while Indonesia, Malaysia, Bangladesh and Pakistan (representing the Asian region). This study assesses the degree of integration not only between developing stock market but also with the world largest stock market, namely US, UK and Japan. The findings showed that based on the geographical proximity as the main factor for influencing integration between develop and developed Islamic financial market, in particular, The Islamic financial market, in the Asia region are found to be more responsive to shock in the Japanese market, while those in MENA region are more responsive to shock in the UK market.

Al-Zoubi and Maghyereh (2007) examine the integration using Risk Metrics, student-t APARCH and Skewed student-t APARCH, the result showed that Dow Jones Islamic Market is less risky than its respective benchmark. Very few studies have focused on the emerging financial markets of the organizations of Islamic countries (OIC)[1] that covers a wider geographic area. Inter-state Bank integration level will be influenced by geographical location. Countries with the same economic grouping and geographically closed to each other tend to have strong integration with each other.

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[1] The organization of the Islamic conference (OIC) is an inter-governmental organization which includes membership of 57 states spread over four continents. The organizations was established upon a decision of the historical summit which took place in Rabat, Kingdom of Morocco on 12th Rajab 1389 *Hijra* (25 September 1969) as a result of criminal arson of *al-Aqsa* Mosque in occupied Jerusalem (http://www.sesric.org/sesric-about.php).

Majdoub and Mansour (2013) study the conditional correlations across US market and a sample of five Islamic emerging markets, namely Turkey, Indonesia, Pakistan, Qatar, and Malaysia. The estimation results of the three models corroborate the stylized fact that the US and Islamic emerging equity markets are weakly correlated over time. Ggeographically far from each other contributes to the weak correlation, other than that is the fact that the number of foreign investor from and to the US and Islamic emerging equity is quite small although investor not too familiar with both market. However, the choosing of emerging markets as a research background needs adjustment to countries that represents wider geographical area, from Middle East, Asian and European countries.

Kassim (2010) studies the impact of 2007 global financial crisis on the integration of the Islamic financial market. Seven Islamic financial market are chosen based on country development and geographical closeness; Malaysia, Indonesia, Turkey, Kuwait, US, UK and Japan. The result of the study showed Islamic financial market is not spared from the global financial crisis as all the Islamic financial market included in this study was adversely affected by the financial crisis.

Methods

This study is analysed on 25 banks' data across selected countries. In the present study, ROA (Return on Assets) and ROE (Return on Equity) are used as measure of performance of diversification of banks. The number of credits and the amount of credits that *Sharia* banks let borrowers' use are employed as control variables. According to the result of the analysis showed Indonesia *Sharia* banks Integration with another *Sharia* banks in selected countries are varied based the geographical proximity and bilateral trading relation with selected countries.

ARDL Bound Testing Approach

To examine the long-term relationship of *Sharia* banking integration in the selected region, this study uses the ARDL-bound testing approach for co-integration which involves estimating the conditional error correction version of the ARDL model (Pesaran et al. 2006). The choice of the ARDL approach in this study is based on consideration of an unbiased and efficient joint integration analysis given the fact that, first, it can be applied to small sample size studies and therefore conducting bound tests would be appropriate for this study. Second, estimating the short and long term components of the model simultaneously, eliminating problems associated with omitted variables and autocorrelation. Finally, it can distinguish between dependent and independent variables.

In this study, the following estimates are the basic model:

$$INA_t = \ _0 + \ _1 MY_t + \ _2 IND_t + \ _3 QR_t + \ _4 JAP_t + \ _5\ BH_t + \epsilon_t$$
$$MY_t = \ _0 + \ _1 INA_t + \ _2 IND_t + \ _3 QR_t + \ _4 JAP_t + \ _5 BH_t + \epsilon_t$$

Where INA, MY, IND, QR, JAP, BH refer to *Sharia* banking in Indonesia, Malaysia, India, Qatar, Japan, and Bahrain, respectively, and € is the error term for the model.
The error correction version of the ARDL framework relating to the following equation;

$$INA_t = 0 + \sum_{i=1}^{p} \varepsilon_i \, INA_{t-1} + \sum_{i=1}^{p} \phi_i \, MY_{t-i} + \sum_{i=1}^{p} \phi_i \, IND_{t-}$$

$$_i + \sum_{i=1}^{p} Y_i \, QRK_{t-i} + \sum_{i=1}^{p} \mu_i \, JAP_{t-i} + \sum_{i=1}^{p} V_i \, BH_{t-i} + 1INA_{t-1} + 2MY_{t-1} +$$

$$3IND_{t-1} + 4QR_{t-1} + 5JAP_{t-1} + 6BH_{t-1} + u1_t$$

$$MY_t = 0 + \sum_{i=1}^{p} \varepsilon_i \, MY_{t-1} + \sum_{i=1}^{p} \phi_i \, INA_{t-i} + \sum_{i=1}^{p} \phi_i \, IND_{t-i} + \sum_{i=1}^{p} Y_i QRK_{t-}$$

$$_i + \sum_{i=1}^{p} \mu_i \, JAP_{t-i} + \sum_{i=1}^{p} V_i \, BH_{t-i} + 1MY_{t-1} + 2INA_{t-1} + 3IND_{t-1} +$$

$$4QR_{t-1} + 5JAP_{t-1} + 6BH_{t-1} + u1_t$$

In the above equation, the term with the sum mark represents the dynamics of error correction while the second part (the term with s) corresponds to a long-term relationship. Zero without co integration in a long term relationship is determined by H0: 1 = 2 = 3 = 4 = 5 = 0 tested against alternative H1: 1 ≠ 2 ≠ 3 ≠ 4 ≠ 5 ≠ 0 by F-test, however, the asymptotic distribution of F these statistics are non-standard regardless of whether the variable is I (0) or I (1). Pesar *et al* (1996) have tabulated two sets of corresponding critical values. One set assumes all variables are I (1) and the other assumes that they are all I (0). This provides a limitation that includes all possible classifications of variables into I (1) and (I) 0 or even fractionally integrated. If the F-statistic is located above the upper boundary level, then zero is rejected, which indicates co integration. While if F-Statistics falls below the bound level, null cannot be rejected, this supports no joint integration.

Finally, to determine the optimal lag length included in the model and to select the ARDL model to be estimated, this study uses Akaike (1974) Information Criterion (AIC) with a maximum lag length considered 8.

$$\begin{bmatrix} \Delta IN \\ \Delta MY \\ \Delta IND \\ \Delta QR \\ \Delta BH \\ \Delta JAP \end{bmatrix} = \begin{bmatrix} \delta 0 \\ \delta 1 \\ \delta 2 \\ \delta 3 \\ \delta 4 \\ \delta 5 \end{bmatrix} + \sum_{i=1}^{K} r_i \begin{bmatrix} \Delta IN \\ \Delta MY \\ \Delta IND \\ \Delta QR \\ \Delta BH \\ \Delta JAP \end{bmatrix}_{t-k} + \prod \begin{bmatrix} IN \\ MY \\ SG \\ FN \\ BH \\ JAP \end{bmatrix}_{t-1} + \begin{bmatrix} v0 \\ v1 \\ v2 \\ v3 \\ v4 \\ v5 \end{bmatrix}$$

In this study, the akaike information criterion (1974) was used to determine the incorporation of lag length in all tests of this study. It is important to note that the GMM estimator must be identified; there must be at least Z instrumental variables because there is a parameter Ө. Following Lee et al (1997), this study uses lag explanatory variables as instrumental variables. These variables were chosen for use because of difficulties in finding other instrument variables, because this study uses daily data and for extended

periods. These variables, however, are clear instruments and in many cases, must be included in the instrumental list. Another important aspect in determining GMM is the choice of a weight matrix to produce consistent and strong estimates.

Data

ROA (Return on Assets) and ROE (Return on Equity) are used as measure of performance of diversification of banks. The number of credits and the amount of credits that *Sharia* banks banks let borrowers' use are employed as control variables

Findings

Table 4.1. **Descriptive Statistics of Selected *Shari'ah* Banks**

Statistics	ID	MY	IND	QR	BH	JAP
Mean	0.1411	0.3872	0.0004	0.0003	0.0007	0.0001
Median	0.4500	0.3700	0.0089	0.0033	0.0002	0.0064
Maximum	0.4900	0.4800	0.0617	0.0833	0.0485	0.0835
Minimum	0.0956	0.3300	0.6176	-0.0061	-0.0158	-0.0109
Std Deviation	0.0426	0.9224	0.0403	0.0226	0.0111	0.0300
Skewness	0.0206	0.8608	-0.6438	-0.6711	-0.4949	-0.9972
Kurtosis	2.3836	3.0325	0.2373	3.1044	2.07115	3.8300

Descriptive analysis provides initial description of the nature and volatility of *Sharia* banking integrity in selected countries. At the same time, this allows the comparison of basic performance indicators of *Sharia* banking enabling the observation of how they are respectful of one another.

Table 4.1 provides a summary of bank returns statistics for selected *Sharia* Banks in a country included in this study. In terms of the highest average daily returns, Malaysia shows the highest average daily returns of 0.38 percent, followed by Indonesia at 0.14 percent, Bahrain 0.07 percent, India and Qatar at 0.04 and 0.03 percent and Japan at 0.01 percent. In terms of return volatility reflected in standard deviations, Malaysia is the highest risk at 0.92, followed by Indonesia at 0.04, Bahrain and India offering the lowest risk of 0.01 percent. Regarding slope measurements, *Sharia* banks in Bahrain, India, Qatar and Japan shows a negative slope. Negative biases imply that the left tail in market distribution is longer (also known as left-leaning) and also as a sign of nonlinearity in the dynamics of integration in these countries.

In this case relating to investment returns and the ability of investors to gain momentum to diversify portfolios, a negative trend also means that investors tend to have only a few extreme losses and often make small profits. If the value is related to an investment perspective, investors rarely take the opportunity to move their capital although there is chance of higher profit. Maximum returns between countries vary where Indonesia and Malaysia have something in common in offering maximum returns, while minimum returns fluctuate between countries, where India, Bahrain and Qatar showed a tendency to offer negative minimum returns.

In conclusion, *Sharia* Banks that have the highest volatility are *Sharia* banks in emerging and developing markets; Malaysia and Indonesia. The volatility of Malaysia *Sharia* banking can be explained as a result of socialized background of *Sharia* Banking in Malaysia which results in opportunities to benefit from diversification of the portfolio towards the adoption of different strategies of the banks (Pandian and Jayanthi, 2009). Meanwhile, investor response due to the lack of information about *Sharia* banks products can be described as sharia banking volatility in Indonesia. The lack of information is about the screening process, banks background and product types from *Sharia* banks.

Table 4.2. **Relationship between *Sharia* Banks in Selected Countries**

	ID	MY	IND	QR	BH	JAP
ID	1.000					
MY	0.430	1.000				
IND	0.312	0.341	1.000			
QR	0.241	0.453	0.031	1.000		
BH	-0.222	-0.456	0.674	-0.765	1.000	
JAP	0.431	0.789	0.563	0.876	0.765	1.000

Table 4.2 showed that during the observation period, the chosen *Sharia* banks show strong correlations with each other as reflected by strong correlation coefficients. The strongest correlation or the highest correlation value is recorded between the Qatar and Japan (0.876), followed by Malaysia and Japan (0.789) and Bahrain and Japan (0.765). This strong correlation between *Sharia* Banks proves that the major factors contributing to strong correlations, namely economic grouping and geographical proximity, do not apply in this study, since countries that correlate with each other come from different regions, between asia and central, east or between developed and developing countries. Furthermore, this section of the study did not find any correlation or weak correlation between Asian integration into Asia, which is also similar to previous research on Asian banking integration (Gupta and Guidi, 2012).

Japan's Sharia banks shows a strong correlation with other selected *Sharia* bank in this study, although Japan's *Sharia* banks is considered relatively new, however Japan has strong bilateral trade between selected countries and resulting into a strong interdependencies between *Sharia* banks. Other *Sharia* banks also show strong correlations, except for the

Bahrain and Indonesia with values smaller than 0.1. While Indonesia and Bahrain, Malaysia and Qatar showed the weakest correlation with a negative correlation value. The weak correlation between *Sharia* banks shows that there is no short-term co-movement between banks and indicates the possibility of short-term diversification benefits.

The benefits of diversification in several countries imply that these countries implement open market system where investors easily move their funds to that country and resulting into the possibilities for high speculative actions, specifically for countries with the weakest correlations; India-Qatar (0.031), Indonesia-Bahrain (-0.222), Malaysia and Bahrain (-0.456). Bahrain and India *Sharia* banks. Weak economic interdependence can be the reason for the low correlation between Indonesia and Malaysia with other Sharia banks. Furthermore, correlation between Bahrain and Qatar remains weak because of the policy of closing foreign investing in several Banks in Middle East. As for Sharia banks in Indonesia and Malaysia, where both countries have high correlation with each other with a value (0.430) however not as strong as Japan and Qatar. The correlation between Indonesia and Malaysia due to its proximity, makes investors in both countries have flexibility in terms of liquidity, they tend to move and divert their investment.

The point where banks integration correlation brings benefits to each other is when investment returns are higher thus exposure risk tends to increase and as a turning point the benefits of portfolio diversification are low, but that moment will give investors the opportunity to diversify their portfolios in all *Sharia* banking and get opportunities to reduce risk. In the context of integration, information should available to all investors. The correlation between countries showed that return of investment in several countries contain information about general stochastic trends, where the ability to predict return of one country can be used by another countries. In its implementation, the movement of capital depends on how much the interdependence of one country with other countries in terms of economic relations, bilateral trade and cultural equality (Karim and Karim, 2012).

Table 4.3 **ARDL- F Statistic for Testing Existence of Co-Integration**

Order of Lag	Model 1 (INA, MAL)	Model 2 (IND, QR, BH, JAP)	Model 3 (INA, IND, QR, BH, JAP)	Model 4 (MAL,IND , QR, BH, JAP)	Model 5 (INA, MAL IND, QR, BH, JAP)
1	1.217	2.117	1.9832	2.7652	0.2728
2	1.224	2.445	1.6322	2.7699	0.9823
3	1.321	2.321	1.6543	1.9202	0.7288
4	2.1150	3.431	2.6548	3.92829	0.6754
5	4.321	3.011	2.8903	1.90231	0.5632
6	1.321	3.221	2.9783	1.08299	0.7654

Notes: The relevant critical value bounds are taken from pesaran (2001): (i). Case iii: unrestricted intercept and no trend (number of regressors = 7), they are 2.96 – 4.26 at the 99%; 2.32-3.50 at the 95%; and 2.03 – 3.13 at the 90% significance levels respectively; and (ii) Case v: unrestricted intercept and unrestricted trend (number of regressors = 7), they are 3.34 – 4.63 at the 99%; 2.69-383 at the 95%; and 2.38 – 3.45 at the 90% significance levels respectively. * denotes that F-statistics falls above the 90% upper bound.

ARDL analysis determines the existence of a long-term equilibrium relationship between *Sharia* banks. Statistically, two or more banks are integrated with each other if the market offers long-term equilibrium relationship between two variables (Yusof and Majid, 2006). For banks integration, the concept of banks moving together in the long run is the result of arbitration activities. Arbitrage in investments is prohibited, because this action is a form of taking advantage of certain moments by taking advantage of the weaknesses of others. The existence of common long-term trends in bank integration proven empirically by a combination of F-Statistics generated by the estimation equation. Table 4.3 shows ARDL test results for the existence of long-term co-integration. Indonesia and Malaysia show weak co-integration (90 percent significance level) in the long lag 1, indicating that there is a long-term balance relationship. In model 2 (India, Qatar, Bahrain and Japan) also shows a long-term balance. When the integration of Indonesia and Malaysia is concluded in the model (Models 3 and 4). However, when Indonesia and Malaysia were included and connected to all selected (Model 5) these banks were found to be insignificant and not integrated with each other. The results also imply that co-integration is not related to geographical factors or economic grouping. In the context of portfolio diversification, investors can benefit by diversifying their chosen portfolio in this research.

Long-term equilibrium among selected countries eliminates institutional constraints consisting of taxation, foreign exchange control, bank regulations, transaction costs and foreign markets exposure to investors (Bartram & Dufey, 2001). Institutional constraints for Indonesia are in the form of lowering taxes for foreign investors, transparent regulations, reducing transaction costs such as brokerage fees and increasing liquidity. Meanwhile, institutional constraints for Malaysia are reducing taxes for foreign investors and open market policies to attract more foreign investors. Qatar institutional constraints are not in the form of taxation, because countries abolish taxes for foreign investors especially taxes for returns, flexible rules must be implemented especially in terms of transaction costs and brokerage fees. Institutional constraints to Bahrain related with eliminating high taxes and banking regulations to be more transparent for foreign investors to minimize risk. Japan institutional constraints are to introduce their *Sharia* banks to the world, because as an industrial country, conventional bank in Japan is more familiar to the world and its public.

Conclusion

Another objective of this study is to review the sharia Bank's integration of implications for portfolio diversification. However, if the market is fully integrated, the diversification benefit will be very limited, as there is no opportunity to diversify portfolios into other countries. The nature of integration between *Sharia* banking conveys important information for effective banks diversification. The first integration of *Sharia* banking basically shows the efficiency of the financial markets. Therefore, the price of assets in an efficient banking industry fully reflects all available information and is therefore consistent with economic fundamentals (Beechey, et al, 2000). In efficient information, generally,

bank integration will increase, because information movement between countries is higher due to the removal of obstacles such as a prohibition on investing for foreign investors or improving trading facilities.

The implication of this research for investor to invest in selected *Sharia* banks is that there are huge potential benefits of international portfolio diversification across these countries. In term of their correlation coefficient, Indonesia and Malaysia is emerging and become a considerable portfolio diversification. However, other countries like India, Japan, Bahrain and Qatar also attract foreign investor to diversify their portfolio provide huge return but huge risk as well.

Furthermore, to gain more benefit from portfolio diversification in Indonesia *Sharia* banks, Indonesia should set up *Sharia* financial policies that consist of regulation to strengthen the coordination between countries, the policy could be in form of removal trading barriers, considering a policy about mutual coordination between countries to develop *Sharia* banks also implementing macro economy policy to stabilize domestic banking market. By coordinating on how to diversified *Sharia* bank product will strengthen *Sharia* rules in term *Sharia* screening process or *Sharia* investing mechanism.

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