Did Financial Integration Provide Financial Depth to ASEAN Countries?

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Abstract

After East Asian financial crisis of 1997-1998, financial integration between ASEAN nations increased. But most of the ASEAN countries could not get better consequences of integration i.e. growth and risk sharing. To have a financial integration that makes economic sense, countries must attain financial depth. This study investigates whether ASEAN countries in our sample (Indonesia, Malaysia, Singapore, Thailand, Japan, and the Philippines) increased their financial depth by having a strong degree of financial integration. Our results indicate that in the short-run, only Indonesia and Philippines could achieve financial depth. However, in the long-run, Indonesia, Malaysia, Philippines, Singapore, and Thailand experienced the role of financial integration in enhancing financial depth. Only Japan witnessed no role of financial integration in the short-run as well as in the long-run. The results indicate that focus on stock market development may lead to more financial depth in the long-run as well as in the short-run.

Keywords: Financial integration, financial depth, capital market development, financial development, ASEAN

1. Introduction

The Association of Southeast Asian Nations (ASEAN) was established with the objective of enhancing economic ties among countries. It took a step ahead and established ASEAN Economic Community (AEC). This forum would facilitate the free flow of goods, services, and capital across the region by the year 2020. The formation of ASEAN Economic Community (AEC) was a step towards enhanced integration encompassing the economic and market integration. It is important to mention that for ASEAN, European Union has been a role model to follow. Therefore, the integration experience of Europe was served as food for thought for the economic managers of the ASEAN region.

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Many factors are responsible for regional integration in East Asia. One of the factors was the Financial Crisis of 1997-1998, to which many East Asian countries fell victim. This crisis called for more resilient regional economic integration capable of absorbing adverse shocks. The ASEAN financial integration was also augmented by preferential trade agreements. Although, financial integration among ASEAN nations was not up to the mark, some progress in this area was made in the form of one-stop investment centers and ASEAN Investment Area (AIA).

On the pattern of European Economic Community, ASEAN nations hold an opinion of creating an ASEAN economic community (AEC) by 2020. They also positioned the European Union experience of economic cooperation before. It is beyond doubt that financial integration is not a simple process that is completed overnight. This is a slow and time taking process which follows the economic integration, as happened in the case of European Union (EU). After establishing trade and economic linkages, EU went for monetary union. It consequently, harmonizes the process of integration.

ASEAN has also taken a step towards the formation of ASEAN Bond Market, later on suffered from problems of market depth and liquidity. To attract Foreign Direct Investment (FDI), ASEAN has taken many initiatives. The idea of ASEAN Investment area is a step towards this objective.

The role of sound institutional frame work and robust regulatory supervision is also worth discussion. Less developed countries generally lack in institutional quality and financial depth. On this basis ASEAN can be differentiated from Europe; in EU most of the countries had achieved robust level of financial development while in the case of ASEAN many developing countries lacked in financial development and financial depth. Most of the economies of ASEAN region are emerging economies, offering higher returns to the investors than the financially developed economies. Despite this, ASEAN is far behind in reaping the fruits of financial integration. One of the reasons may be a weak institutional framework, inadequate regulatory supervision and lack of financial depth.

ASEAN nations experienced considerable financial integration during last few decades. Countries like Indonesia, Malaysia, Singapore, and Thailand took concrete steps for capital market integration. After the financial crisis of 1997-1998, ASEAN nations experienced a higher degree of integration. Generally, financial integration results in growth, risk sharing, and consumption smoothing. These benefits are attained from financial integration when it is accompanied by financial development. When we talk about financial development we mean stock market development and financial depth. It is important to observe that whether ASEAN nations have received

financial depth as a result of financial integration. It is worthwhile because usually the countries of this region have not benefited from financial integration. This study is an endeavor to find out whether increased financial integration after the financial crisis has helped ASEAN nations (Malaysia, Indonesia, Singapore, Thailand, Japan, and Philippines) increase their financial depth.

Considerable work has been done on the financial integration. We found it interesting to have in-depth analysis of whether financial integration provides financial depth to ASEAN countries. Our contribution has two major aspects

First, we empirically test that the financial integration provides financial depth to the ASEAN (Malaysia, Indonesia, Singapore, Thailand, Philippines, and Japan) countries for the period of 1998 to 2013.Generally; it is considered that countries reap the benefits of financial integration in the form of economic growth, risk sharing, and consumption smoothing. However, in order to have these benefits, countries should achieve a considerable level of financial depth. Financial depth enhances the confidence of overseas investors in the financial system. A developed financial system provides risk aversion mechanism to investors in the form of hedging and insurance. Masten, Coricelli, and Masten (2008) substantiated that countries enjoy the benefits of financial integration, when they attain sufficient financial depth. Masoud and Hardakar (2012) affirmed that financial depth leads to economic growth. The above mentioned studies were conducted in the context of financial integration. It implies that mere financial integration cannot guarantee economic growth unless it is accompanied by financial depth. This highlights the importance of financial depth from the empirical point of view.

Second, it is also worth noting aspect to examine the degree of integration in attaining financial depth. Moreover, we will come to know how trade development and stock market development have significant role in the attainment of financial depth. For this we categorized our sample countries into long-run and short-run across sampled ASEAN countries.

This study ascertains whether the integration of ASEAN nations was meaningful to have financial depth? The answer to this question may guide the policy makers in having a more meaningful and fruitful financial integration. Empirical evidence on financial integration provides financial depth to ASEAN countries is not only important for policy makers but also for investors, researchers, and academia to fully understand the link between financial depth and financial integration.

2. Literature Review

This section provides ample previous research findings and discussion in respect

of factors that may impact financial depth in the context of financial integration. That is financial development (Capital market development or stock market development, credit market development, or financial depth), the degree of financial integration and trade openness were discussed in the light of previous studies.

Various aspects of financial integration like the degree of financial integration, financial openness, and trade openness etc. are worthy of discussion. Researchers have given considerable attention to the factors, like financial development, financial depth, and trade openness.

Financial integration has been a growing phenomenon in recent years. The evidence to this has been a considerable increase in quantum of international assets and liabilities which has become thrice of GDP since the mid-1980s (Lane & Milesi-Ferretti, 2007). It would be interesting to see whether financial integration served countries to gain financial depth. This question is, no doubt, significant academically and from the policy point of view. Such study may be helpful in ascertaining whether capital market integration among such countries provided strength to their financial system. Some studies shed light on this phenomenon as in the case of Imbs (2004), Imbs and Romain (2003), and Kose, Prasad, and Terrones (2003) establishing that financial integration has a positive effect on financial development. Kose, Otrok, and Prasad (2008) and Kose, Otrok, and Whitman (2008) affirmed the same. Such studies did not take into account the effect of capital market integration between countries having a weak institutional framework. The question whether countries gained financial depth may be asked in the context of Global integration as well as regional integration. Regional integration is more common than global integration. It is empirically known that advanced economies and emerging markets are partially integrated (Johnson & Soenen, 2006).

The importance of financial depth can be judged from the fact that it helps countries to reap the benefit of growth as well as absorb shocks. Credit market linkages may cause the spread of crises as highlighted by Kaminski and Reinhart (2000). The said phenomenon was empirically observed by Moto, Lucio, and Taylor (2007). International credit market integration may be beneficial as well as harmful. The Recent financial crisis of 2008 may be attributed to cross-border credit market integration. The same was empirically tested and affirmed by Citronella and Goldberg (2011). Some researchers such as Baxter and Crucini (1995), Heathcote and Perri (2002, 2007) and Faia (2007) established that with the increase in the degree of financial integration, business cycle correlation decreases. Therefore, financial integration may provide avenues for diversification and risk sharing. However, the generalizability of the results is yet to be seen. It is worth mentioning that empirically financial integration and cyclical co-movements are positively associated. However, in theory, it is otherwise.

It was observed that equity market integration among developed countries is high while equity markets of emerging economies are less integrated. Hence, the degree of stock market integration is important from the academic and empirical point of view. Korajczyk (1996) observed that the degrees of equity market integration are influenced by economic growth, financial market development, and explicit capital controls. Auzairy (2012) stressed on the need to ascertain the determinants of equity market integration in order to achieve the regional and global financial integration.

The degree of equity market integration has important implications for the investors as it may affect the diversification benefits for the investors. Ibrahim (2005) observed that the degree of equity market integration has major implications on the financial stability of a country. Study of forces behind the market integration is beneficial for international investors to understand the risks and returns of diversification. Especially with reference to ASEAN countries, Karim and Karim (2012) identified contagion effect, economic integration, and capital market characteristics in order to contribute to the research on financial integration. Chuah (2005) reported that the level of integration of emerging markets is determined by the stock market development, trade openness, and country risk.

Financial integration gives rise to financial development which brings about growth and other benefits. Hence financial development is a bridge between financial integration and growth. The growth benefit would depend on the degree of integration and removal of some frictions in the markets. The impact of financial development (financial depth) on growth was tested on large data set by controlling the other factors of growth in a study conducted by King and Levine (1993). The positive impact of equity market development and credit market development on growth was observed by Levine and Zervose (1998). Levine and Zervose (1998) also appreciated relationship between financial openness and financial depth. It is interesting that the effects of financial development on growth are nonlinear and not uniform. An important finding was reported by De Gregorio and Guidotti (1995) that the growth effects of financial development vary across countries and time. That is growth supported by financial development is time and country variant. They added such effects may become negative. An important research finding came from Rioja and Valve (2004) who observed that relationship between financial development and growth changes on the basis of different levels of financial development. They identified different regions of financial development which may affect the growth effects of financial market integration.

In the context of financial depth and financial integration, the study conducted by Masten et al. (2008) is considerably relevant. Using panel data of countries, they observed that growth benefits are reaped by the countries when the threshold level

of financial development passes 90% of GDP then it gradually declines. When the level of financial development exceeds 160% of GDP, the growth benefits become insignificant. Although it was not a rigorous study to capture the threshold effects of financial development, yet a general inference may be drawn that financial integration becomes fruitful to the economies when countries experience financial depth in the range of 60% and 150% of GDP.

Masten et al. (2008) added that countries having less financial development have to suffer from havocs of market integration. They reported that the growth benefits are achieved to the economies when a threshold level of financial development is achieved. The countries below this threshold level or above this level fail to achieve the desired benefits of market integration. They added that financial market integration would be futile for the countries having weak financial institutions and less capacity to absorb shocks at the time of crisis. And this shock absorption capacity lies in the development of financial system. Therefore, the variable the financial depth becomes important from the empirical point of view.

Trade openness is a factor which deserves special attention in the context of financial integration. This is well documented that capital market integration follows the economic integration. Clausing and Dorobantu (2005) reported that investors would divert funds to those markets (economies) which are open to trade and enjoy the stable economic environment. Davis (2012) also considered bilateral trade integration as an important and supportive factor for fruitful integration.

3. Methodology

For the purpose of our study panel data of countries from ASEAN regions (Malaysia, Indonesia, Singapore, Thailand, Philippines, and Japan) was collected. Yearly observations of these countries from 1998 to 2013 were taken. Our data consists of the dynamic heterogeneous panel since countries differ in level of financial development, trade openness and degree of integration. Data was taken from World Development Indicators, World Bank publication, an external wealth of nations data set compiled by Lane and Milesi-Ferretti (2007), and IFS published by IMF. This data contains the yearly observations of economic variables. Yearly observations were taken since financial integration is a long-run phenomenon. Moreover, for our purpose monthly and quarterly values of financial depth, stock market development, and trade openness, would not serve the purpose. Usually in the case of macroeconomic variables yearly observations are more suitable than quarterly or half-yearly data.

As far as the measure of the degree of financial integration is concerned, net foreign asset position of countries was taken into account. We have relied on Lane and

Milesi-Ferretti (2007) who have used a ratio of net foreign assets to GDP to measure the degree of financial integration. This measure incorporates foreign assets and liabilities in the form of portfolio investment in equities. Moreover, correlation of returns on financial assets was also computed to ascertain a convergence of returns. The reason being financial integration results in convergence of returns on financial assets traded in different markets. On the basis of this, six countries from ASEAN were taken in our sample.

3.1 Variables and their Measurements

Our study uses stock market development (STCKMKTDEV), Trade Openness (Trade open) and degree of financial integration (DFI) as independent variables. Stock market development is a proxy for capital market development and is measured by the ratio of market capitalization to GDP. Trade openness was worked out by obtaining the ratio of the sum of exports and imports to GDP. Financial integration was worked out by taking absolute ratio of net foreign assets to GDP. As far as measurement of a dependent variable, financial depth is concerned, it is measured by a ratio of domestic credit to private sector to GDP.

3.2 Pooled Mean Group Regression

The methodology was selected keeping in view the attributes and nature of the data as well as the objective of research. We have macro-level data of different countries. These countries differ in level of their financial development, trade relations, and degree of market integration. Our variables like financial development, the degree of integration and trade openness are not fixed rather time varying. Therefore, our panel is the dynamic heterogeneous panel.

If we use only cross-sectional data, we would not be able to identify and control for such individual effects. It is also of concern to us that the correlation of intercept term (country specific effect) with the independent variables is not significant. In the presence of such correlation, ordinary least square estimates of our parameters become biased and inefficient. Same is the case with generalized least square (GLS). To overcome this problem, one traditional technique is to eliminate the country specific effects in the sample. This is accomplished by data transformation, i.e. by taking the deviation from individual country's mean.

Transformation of data to eliminate the country specific effects is not a satisfactory solution to the problem. This technique suffers from two shortcomings. The first one is the elimination of those variables which do not change with time. Thus it would not enable us to measure the time-invariant effects which may lessen the explanatory

power of the model. The second issue is when variation across different cross-sections is not taken into account; our estimator no longer remains an efficient estimator. The first issue is more problematic when the primary objective of the research is to ascertain those parameters which do not depend on time.

Observation of variation across the cross-sections such as countries in our study is very important to us. Historically we know that when countries integrate, their level of financial development, growth rates, financial openness would not be same across the board. The differences in parameters in the long-run as well as in the short-run are of great value to us since it would enable us to appreciate the impact of our parameters like stock market development and degree of financial integration on financial depth in respect of each country in the long-run as well as in the short-run.

Given the objective of study, we had to choose from three alternatives, fixed effect estimators, random effect estimators and mean group estimators. However, we preferred Mean Group Estimator to the other methods. In choosing Mean Group Estimation, we have relied on Pesaran, Shin, and Smith (1999). Mean group estimator helps us measure cross-section-wise long-run and short-run coefficients. Pooled Mean Group (PMG) regression computes common long-run coefficient without making the assumption of similar dynamics for each cross-section. Moreover, PMG estimation is capable of investigating long-run homogeneity while not imposing the condition of parameter homogeneity in the short-run.

Endogeneity is a major issue in panel data that needs to be taken care of. This phenomenon makes the estimates biased one. One of the advantages of PMG estimation technique is its ability to deal with potential endogeneity. We have relied on Vereulen and Haan (2014) who applied this method while investigating the relationship between financial development and financial openness. Pesaran et al. (1999) reported that for pooled data the conventional methods of estimation such as fixed effect model, generalized method of movements (GMM) and instrumental variables (IV) proposed by Arellano and Bover (1995) and Ahn and Schmidt (1995) suffer from the problem of inconsistent and misleading estimates in dynamic panel data models when slope coefficients are not identical. Therefore, an estimate with weaker homogeneity assumption would be appropriate one. Our selection of PMG estimator also draws support from Hsiao, Pesaran, and Tahmiscioglu (1998). That is why Pool Mean Group regression was preferred to other estimators.

4. Results and Discussion

Pool Mean Group (PMG) regression was used to estimate coefficients of independent variables. Table 1 presents short-run mean group estimates of financial depth,

Table 1: Estimated Short-run Coefficients for ASEAN Countries (Dependent Variable: Financial Depth)

	TRADE-OPEN	STCKMKT-DEV	DFI	Constant	ECT
Country	0.001(1.7)	0.34(2.69)*	0.23(4.65)*	11.8(0.53)	0.45(2.05)
Indonesia	-0.04(-0.04)	0.15(0.79)	0.53(0.78)	-138.4(-1.45)	0.45(1.05)
Japan	1.14(0.34)	0.13(0.31)	0.49(0.25)	-10.3(-0.05)	0.10(0.32)
Malaysia	0.02(0.47)	0.03(2.55)*	-0.03(-0.34)	18.6(0.5)	-0.56(-1.09)
Philippines	0.38(1)	0.01(0.27)	0.06(1.73)	-228.6(-3.45)	1.22(3.86)
Singapore	0.28(0.69)	-0.14(-0.84)	0.45(0.79)	-67(-1.18)	0.43(1.68)
Thailand					

Note: Values of Z-statistics at 5% level of significance have been provided in parentheses.

*Significant at 5% level

trade openness, stock market development and the degree of financial integration. The results speak for the role of regressors like trade openness, stock market development and degree of financial integration.

In the short-run, Indonesia experienced positive role of stock market development and degree of financial integration. In the long-run, stock market development, the degree of financial integration and Trade openness proved fruitful. This reflects that for Indonesia, all three independent variables contributed to financial depth in the long-run. However, in the short-run, degree of integration and stock market development were found significant. The contribution of stock market development was bigger than that of other variables in the long-run as well as in the short-run. If we look at these results in the light of historical data, we may say that degree of financial integration and stock market development increased following trade openness. At present the average level of stock market development is low. Thus by increasing stock market development, more financial depth can be attained.

In the case of Japan, no variable was found significant to influence financial depth. Japan is financially developed and economically strong country. The results show that stock market development and degree of integration did not provide any support to financial depth. Trade openness was also found insignificant. One interpretation of these results may be that Japan is economically and financially developed country amongst all the ASEAN nations. Japan's integration with the ASEAN nations did not provide it financial depth. However, other countries gained the advantage of Japan's development. This is still meaningful since the gains of financial integration are not equally shared among nations as reported by Auzairy (2012).

The degree of integration and stock market development did not play any role in attaining financial depth for Malaysia. However, in the long-run degree of integration and trade openness was found significant for Malaysia. It reflects that financial integration was proved fruitful for Malaysia in the long-run only. Generally, financial integration takes the time to become beneficial for the countries.

Singapore is a developed nation and enjoys good institutional strength. It did not experience financial depth in the short-run. No variable was found significant in the short-run. However, in the long-run, trade openness and degree of integration were found significant. It may be inferred that the country indigenously developed its financial institutions and gained financial depth. Moreover, its stock market development did not lend support to financial depth. In the case of Philippines, stock market development was found significant in the short-run as well as in the long-run. The Philippines' stock market development is not high. By increasing stock market development, financial depth may be enhanced. Historically the Philippines have a high level of trade openness and low level of stock market development. The Philippines has great potential to enhance its financial depth through stock market development. For Thailand role of stock market development and degree of integration were not found significant in the short-run. Thailand enjoyed a robust level of trade openness and a moderate degree of integration.

Table 2 provides long-run estimates of independent variables i.e. stock market development, a degree of integration and trade openness. Long-run estimates are important since financial integration is a long-term phenomenon.

Table 2: Estimated Long-run Coefficients for ASEAN Countries (Dependent Variable: Financial Depth)

ARDL(1,1,1)			
Country	TRADEOPEN	STCKMKTDEV	DFI
Indonesia	0.035(2.13)*	0.77(2.77)*	0.51(2.11)*
Japan	-0.41(-0.11)	-0.32(-0.72)	1.17(1.63)
Malaysia	3.68(2.21)*	-1.25(-0.32)	4.78(2.38)*
Philippines	-0.011(-0.12)	0.06(2.55)*	-0.048(-0.29)
Singapore	0.89(4.07)*	0.01(0.27)	0.05(2.19)*
Thailand	0.34(2.37)*	0.31(2.89)*	1.04(2.71)*

Note: Values of Z-statistics at 5% level of significance have been provided in parentheses.

*Significant at 5% level

In the long-run, degree of integration, stock market development and trade openness were found significant for Indonesia. It is worth mentioning that in the long-run all three independent variables were found jointly significant which shows that Indonesia has benefited from the process of financial integration in the long-run. Moreover, the role of stock market development was more apparent than that of other variables. This may be attributed to Indonesia's integration with developed economies.

In the case of Japan, none of the variables were found significant to augment financial depth in the long-run. One interpretation may be that Japan had already achieved considerable financial depth and its integration with less developed nations did not benefit it. Moreover, the gains of financial integration may not be equally shared among countries as reported by Auzairy (2012). Malaysia witnessed a significant relationship of trade openness and degree of financial integration in the long-run. The degree of integration played a major role in attaining financial depth in the long-run as its coefficient was higher than that of other variables. It implies that with more financial openness, Malaysia increased its financial depth in the long-run. The Philippines observed a significant role of stock market development in the long-run. Stock market development helped attain financial depth in the long-run. Long-run coefficients of trade openness and degree of integration were found significant in the case of Singapore. This implies that by attaining more financial openness and trade openness, Singapore may achieve financial depth in the long-run. Thailand observed the significant role of trade openness, stock market development and degree of integration in the long-run. It is interesting to observe that in the short-run, no variable was found significant for Thailand. Thailand enjoyed considerable trade openness with other nations. The contribution of stock market development was more prominent than that of other variables. Therefore, stock market development played a significant role in attaining financial depth in the long-run.

5. Conclusion

Our results show that Indonesia and Philippines experienced a significant role of financial integration only the short-run. It may be concluded that the gains of financial integration are not equally shared among all countries. Some countries may benefit from financial integration earlier than others. The process of financial integration takes time to become fruitful for all nations. In the short-run, some countries may attain financial depth but it is not necessary that all countries achieve financial depth.

It may be inferred that in the long-run, all ASEAN nations except Japan experienced financial depth due to the role of stock market development, the degree of financial integration and trade openness. However, in some cases, these variables were found jointly significant as in the case of Indonesia and Thailand. Malaysia and

Singapore experienced positive role of trade openness and degree of integration. The Philippines experienced the positive role of stock market development for attaining financial depth in the long-run.

From our findings, it may be inferred that by and large, the process of financial integration for selected ASEAN countries has served to enhance financial depth in the long-run. However, financially-developed countries such as Japan did not find the process of financial integration fruitful. The reason might be that financially developed countries may not experience financial depth when they integrate with less developed countries. On the other hand, financially less developed countries such as Indonesia, Philippines and Thailand were the beneficiary of financial integration in the long-run. They may increase their financial depth by increasing financial openness with relatively developed nations. The results indicated that the process of financial integration yields positive results in the long-run. Moreover, trade openness and financial openness may enhance financial depth in the long-run for countries having low degree of integration and trade openness.

References

Ahn, S. C., & Schmidt, P. (1995). Efficient estimation of models for dynamic panel data. *Journal of Econometrics, 68*(1), 29-52.

Arellano, M., & Bover, O. (1995). Another look at the instrumental variable estimation of error component models. *Journal of Econometrics, 68*(3), 53-65.

Auzairy, N. (2012). Integration of Asian stock markets. *World Academy of Sciences, Engineering and Technology, 72,* 625-631.

Baxter, M., & Crucini, M. J. (1995). Business cycles and the asset structure of foreign trade. *International Economic Review, 36*(2), 821-854.

Chauh, K. C., Gup, B. E., & Pan, M. S. (1997). International stock market efficiency and integration: A study of eighteen nations. *Journal of Business, Finance and Accounting, 24*(4), 803-813.

Chuah, H. L. (2005). *The integration of international equity markets.* Duke University.

Clausing, K., & Dorobantu, C. (2005). Re-entering Europe: Does European Union candidacy boost foreign direct investment. *Economics of Transition, 13*(5), 77-103.

Cetorelli, N., & Goldberg, L. S. (2011). Global banks and international shock transmission: Evidence from the crisis. *IMF Economic Review, 59*(1), 41-76.

Davis, S. (2010). *The adverse feedback loop and the effects of risk in both the real and financial* sectors (Globalization and Monetary Policy Institute Working Paper No. 66). Federal Reserve Bank of Dallas.

De Gregorio, J., & Guidotti, P. (1995). Financial development and economic growth. *World Development,*

23(3), 433-448.

Faia, E. (2007). Finance and international business cycles. *Journal of Monetary Economics, 54*(5), 1018-1034.

Heathcote, J., & Perri, F. (2002). Financial autarky and international business cycles. *Journal of Monetary Economics, 49*(6), 601-627.

Heathcote, J., & Perri, F. (2007). Why has the U.S. Economy become less correlated with the rest of the word? *American Economic Review, 93*(2), 63-69.

Hsiao, C., Pesaran, M. H., & Tahmiscioglu, A. K. (1998). *Bayes estimation of short-run coefficients in dynamic panel data models* (Cambridge Working Papers in Economics No. 9804). University of Cambridge.

Ibrahim, M. H. (2005). International linkages of stock prices: The case of Indonesia. *Management Research News, 28*(4), 93-115.

Imbs, J. (2004). Trade, finance, specialization, and synchronization. *The Review of Economics and Statistics, 86*(2), 723-734.

Imbs, J., & Romain, W. (2003). Stages of diversification. *The American Economic Review, 93*(2), 63-86.

Johnson, R., & Soenen, L. (2006). European economic integration and stock market co-movement with Germany. *The Multinational Business Review, 17*(3), 205-227.

Karim, B. A., & Karim, Z. A. (2012). Integration of ASEAN-5 stock markets: A revisit. *Asian Academy of Management Journal of Accounting and Finance, 8*(2), 21-41.

King, R. G., & Levine, R. (1993). Finance, entrepreneurship, and growth: Theory and evidence. *Journal of Monetary Economics, 32*(3), 513-542.

Kose, M. A., Prasad, E. S., & Terrones, M. E. (2003). Financial integration and macroeconomic volatility. *IMF Economic Review, 50*(1), 119-142.

Kaminski, G. L., & Reinhart, C. M. (2000). On crisis, contagion and confusion. *Journal of International Economics, 51*(5), 145 -168.

Korajczyk, R. A. (1996). A measure of stock market integration for developed and emerging markets. *The World Bank Economic Review, 10*(1), 267-289.

Kose, M. A., Otrok, C., & Prasad, E. S. (2008). *Global business cycles: Convergence or decoupling?* (NBER Working Paper Series No. 14292)

Kose, M. A., Otrok, C., & Whiteman, C. H. (2008). Understanding the evolution of world business cycles. *Journal of International Economics, 75*(1), 110-130.

Lane, P. R., & Milesi-Ferretti, G. M. (2007). The external wealth of nations marks II: Revised and extended estimates of foreign assets and liabilities, 1970-2004. *The Journal of International Economics, 73*(2), 223 -250.

Levine, R., & Zervos, S. (1998). Stock market, banks and economic growth. *American Economic Review, 88*(4), 537-558.

Levine, R., & Zervos, S. (1998). Capital control liberalization and stock market development. *World Development, 26*(5), 1169-1184.

Masoud, N., & Hardakar, G. (2012). The impact of financial development on economic Growth-Empirical analysis of emerging market countries. *Studies in Economics and Finance, 29*(4), 148-173.

Masten, A., Coricelli, F., & Masten, I. (2008). Non-linear growth effects of financial development: Does financial integration matter? *Journal of international money and finance, 27*(3), 295-313.

Moto, A., Lucio, S., & Taylor, M. P. (2007). A cross-country financial accelerator: Evidence from North America and Europe. *Journal of International Money and Finance, 14*(5), 149-165.

Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled mean group estimation of dynamic heterogeneous panels. *Journal of American Statistical Association, 94*(3), 621-634.

Rioja, F., & Valev, N. (2004). Does one size fit all? A re-examination of the finance and growth relationship. *Journal of Development Economics, 74*(3), 429-447.

Vermeulen, R., & Haan, J. D. (2014). Net foreign asset (com)position: Does financial development matter? *Journal of International Money and Finance, 43*(1), 88-106.