

An Empirical Investigation on Capital Market Integration of Asian Countries

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Abstract: *The integration of capital markets is an interesting topic for researchers in the stock market, so it is Not surprising if there have been a lot of researches on the integration of capital markets. Financial Integration is a phenomenon in which financial market in neighbouring, regional or global Economies are closely linked together. Various forms of financial integration include information Sharing among financial institution, firms borrow and raise funds directly in the international capital Markets, newly engineered financial products are domestically innovated and bought in the International capital market, investors are directly invested in international capital market etc. The Association of South East Asian Nations (ASEAN) was founded on Aug 8, 1967 by five countries Namely Indonesia, Malaysia, Philippines, Singapore, and Thailand. They were later joined by Certain other members.*

Keywords: Capital Market, Financial Integration, Financial Market

I. INTRODUCTION

It is an intergovernmental organization of South East Asian countries. It promotes economic, Political and security co-operation among its ten members. ASEAN countries have a total Population of 650 million people and a combined GDP of \$ 2.8 trillion. Security and socio-cultural Integration is an important feature of ASEAN. ASEAN is now considered as a regional and International player. Cooperation is the key ingredient to make ASEAN a success. It is not about Signing treaties or agreements but it is the people to fulfill the dreams of the ASEAN founders. Once achieved, it will extend beyond borders and will boost national security, international trade, Reducing poverty and economic competitiveness.

II. REVIEW OF LITERATURE

1. BA Karim, ZA Karim – 2012: This learn about re-examination of the integration amongst five selected ASEAN emerging Inventory markets (Malaysia, Thailand, Indonesia, the Philippines and Singapore) based totally on Autoregressive Distributed Lag (ARDL) certain trying out strategy proposed by Pesaran, Shin and Smith (2001). This study finds that the stock markets in the ASEAN region are integrated Throughout the pre-, post-1997.

2. S Jakpar, V Vejayan, A Johari 2013: This find out about targets to look at the co-movement of stock market volatility between China and ASEAN-5 nations from the 12 months 2000 to 2009. This find out about applies the trendy linear GARCH (1, 1) model the place these models estimate the use of monthly price information from year 2000 to 2009 for China, Malaysia, Singapore, Thailand, Indonesia and PPhilippines

3. R Robiyanto – 2017: Capital market integration is a concept that attracts a lot of look up interests in regional and International capital markets. Unfortunately, there are pretty a extent search for that have been use Analytical equipment that have not been able to conclude the degree of capital market integration Quantitatively, hence a study that is able to measure the degree of capital market integration Quantitatively is required. This study investigated the capital markets integration in ASEAN by Using the Orthogonal Generalized Autoregressive Conditional Heteroscedasticity (OGARCH) Method which could provide the degree of integration quantitatively.

4. G Lee, J Jeong–2016: This article investigates the dynamic sample of stock market family members between the ASEAN Economic Community (AEC) and two essential stock markets: China and the United States. A GARCH threat decomposition mannequin is developed to replicate the time-varying market Integration. The primary findings of this findings are as follows. First, the AEC is greater built-in With the regional stock market than with the international stock market. Second, the motion in the AEC market is normally driven by means of domestic financial situations.

5. Y Jiang, H Nie, JY Monginsidi – 2017: This paper pursuits to learn about the co-movement and the volatility fluctuation between stock Markets in the Association of Southeast Asian Nations (ASEAN) countries from a new perspective. The analyses additionally delve more deeply into the effect of ASEAN buying and selling hyperlink Institution on the temporary interdependency. By applying three-dimensional non-stop wavelet Seriously change (CWT) on daily returns of stock markets for the duration 2009 to 2016, the Interdependence level and lag-lead relationship among ASEAN trading hyperlink contributors are Estimated.

2.1 Statement of the Problem

The ASEAN Economic Community (AEC) Blueprint 2015 aims to transform ASEAN into a single Market and production base, including the free flow of investment and capital. An important motive Behind this cooperation is to boost the competitiveness of the ASEAN financial market in the global Market platform. To promote financial integration in the ASEAN capital market forum, the capital Experts and regulators from 10 countries generated an implementation plan. This step will place the ASEAN exchange within the top 10 market capital among the World Federation of Exchange (WFE). Despite its appearance as a positive goal, many issues are to be dealt with, especially Financial deregulation. The Asian financial crisis of 1997 was because of financial deregulation. So, The complete capital market integration has been postponed to 2025 because it is necessary to be Careful about the side effects of derestricted policies.

2.2 Significance of the Study

This study helps to have a better understanding of association between well-established ASEAN Stock markets (Malaysian Stock Exchange, Stock Exchange of Thailand, Singapore Stock Exchange, Philippines Stock Exchange and Indonesia Stock Exchange).The research will be Beneficial for shareholders, management, stakeholders, financial institutions and portfolio Managers to utilize their capital across border in a better way.

2.3 Objectives of the Study

1. To analyze the market return and volatility of ASEAN stock markets.
2. To explore the causal relationship and co-integration among ASEAN stock markets.
3. To investigate the short-run relationship among ASEAN stock Markets.

III. RESEARCH METHODOLOGY

3.1 Sources of Data

This study is mainly based on secondary data. Stock market returns of ASEAN countries i.e. Indonesia, Philippines, Malaysia, Singapore and Thailand are taken from World Bank Data Base From 2000 to 2020.

3.2 Data Analysis

Time series data is analyzed by using E-Views. Unit Root Test used to check the stationary of data. Long run relationship among the ASEAN Capital market returns have been explored by employing Johansen's co integration technique. Granger Causality test by Granger to resolve the causality with References to variables in the internal relation. Therefore this technique will be used to detect the Actual causal relationship between the market return of ASEAN countries.

3.3 Methods of Data Collection

- **Primary Data:** The primary data is that data which is collected fresh or first hand, and for the first time which is original In nature. For this process the primary data has been collected from personal interactions with Mr. M.C Paul and other executives.
- **Secondary Data:** The secondary data are those which have already been collected and stored. Secondary data are easily Available from those secondary data of records, annual reports of the company etc.

IV. DATA ANALYSIS AND INTERPRETATION

4.1 Correlation

Correlation matrix of ASEAN countries

	Indonesia	Malaysia	Philippines	Singapore	Thailand
Indonesia	1	.75	.85	.89	.68
Malaysia	.75	1	.62	.76	.46
Philippines	.85	.62	1	.86	.65
Singapore	.89	.76	.86	1	.57
Thailand	.68	.46	.65	.57	1

The Correlation between five markets. Correlation is used to measure the strength Of the relationship between two variables. Indonesia and Singapore have the highest correlation Between them (.89) and Malaysia and Thailand have the lowest correlation (.46).

4.2 Unit Root Test

Unit Root Test Results

Stock market return	Stationary
Indonesia	I(0)
Malaysia	I(0)
Philippines	I(0)
Singapore	I(0)
Thailand	I(0)

In statistics, a unit root test tests whether a time series variable is non-stationary and possesses a unit root. It is necessary to test for stationarity of time series before proceeding the co-integration and long run relationship of the model. The results of both the Augment Dickey Fuller (ADF) test and Phillips Peron (PP) test shows that all variables are stationary at level. Granger causality requires series be stationary.

4.3 Unrestricted Co integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigen Value	Trace Statistic	0.05 Critical Value	Prob.*
None *	.92	100.87	69.81	0
At most 1 *	.78	53.86	47.85	0.01
At most 2	.56	25.84	29.79	0.13
At most 3	.34	10.72	15.49	.22
At most 4	.15	2.99	3.84	.08

These table explains the Trace Statistic and Maximum-eigen value statistic point out two co integrating equation at five percent level. This infers the existence of a long run relationship among The variables of the model. That means all capital market return are co-integrated. If variables are Co-integrated that leads to a long run relationship between the Thailand and other ASEAN Capital Markets.

4.4 Granger Causality Test

Granger Causality Test: Impact of Thailand on other ASEAN countries

Null Hypothesis	F Statistic	Prob.
Thailand does not Granger Philippines.	1.45	0.26
Philippines does not granger cause Thailand	6.79	0.009

Granger Causality Test of ASEAN stock market. Granger Causality test results reveal that bidirectional or unidirectional causal relationship among the member countries of the ASEAN economy. This tests are conducted to know the significance and direction of causality between the market returns and it is performed in pair-form between two countries of ASEAN Countries results reveal that bidirectional or unidirectional causal relationship among the member countries of the ASEAN economy. This tests are conducted to know the significance and direction of causality between the market returns and it is performed in pair-form between two countries of ASEAN Countries.

V. FINDINGS

- It is observed that the market which have the highest return is that of Indonesia (15.17) and the Lowest return is that of Singapore (4.04)
- The market which have the highest risk is that of Indonesia (21.14) and the lowest is that of Malaysia (13.97)
- It is observed that the co efficient of variation is lowest in Thailand (135.54) and the highest Co efficient of variation is of Singapore (396.70)
- Indonesia and Singapore have the highest correlation between them(.89) and Malaysia and Thailand have the lowest correlation(.46)
- There is a long run relationship between the Thailand and other ASEAN Capital Markets.
- There is no relationship exist between Thailand and Indonesia and Thailand and Malaysia

VI. SUGGESTIONS

On a policy level, co integration suggests that initiatives to further integrate the stock markets are Quite feasible, and in fact desirable from the standpoint of efficiency. In particular, since there is Less long-run diversification benefit from investing across all five countries, a regional stock Exchange will nudge investors to spread their money into smaller markets where they otherwise May not. In fact, investors from outside the region may value the benefits of a regional stock Exchange (such as higher liquidity and lower transaction costs) and allocate more capital to the Region than they otherwise would. This will allow ASEAN companies to expand their shareholder base and lower their cost of capital.

VII. CONCLUSION

This research paper examines the dynamic interdependence of the five founding members of ASEAN, namely Indonesia, Malaysia, the Philippines, Singapore and Thailand. Understanding the Information linkages and correlations between markets are important for policy makers and fund Managers in their financial decisions in relation to investment and risk management. An Examination of the ASEAN-5 stock market returns indicates that the highest return is that of Indonesia (15.17) and the lowest return is that of Singapore (4.04) and highest risk is that of Indonesia (21.14) and the lowest is that of Malaysia (13.97). It is observed that the co efficient of variation is lowest in Thailand (131.90) and the highest co efficient of variation is of Singapore (396.70) The main purpose of this study is to measure the Dynamic Linkages among Asian Stock markets. This indicate that there was a co-movement among ASEAN capital markets, but not all these ASEAN capital markets were fully integrated.

REFERENCES

- [1]. Jakpar, S., Vejayon, V., Johari, A., Myint, K. (2013). Aneconometric analysis on The co-movement of stock market volatility between China and ASEAN-5. *International Journal of Business and Social Science*, 4(14), 181–197.
- [2]. Jiang, Yonghong & Nie, He & Monginsidi, Joe Yohanes, 2017. “Co-movement of ASEAN stock markets: New evidence from wavelet and VMD-based copula Tests,” *Economic Modelling*, Elsevier, vol. 64©, pages 384-398.
- [3]. 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.
- [4]. Lee, G., & Jeong, J. (2016). An Investigation of Global and Regional Integration of ASEAN Economic Community Stock Market: Dynamic Risk Decomposition Approach *Emerging Markets Finance & Trade*,52(9), 2069–2086.
- [5]. Lee, H.S.,(2004) “International transmission of stock market movements: A wavelet Analysis,” *Applied Economics Letters*, Vol. 11 No. 3, pp. 197-201.
- [6]. Lim LK (2009) Convergence and interdependence between ASEAN-5 stock markets.
- [7]. Markowitz, H. (1952). Portfolio Selection. *The Journal of Finance* 7(1), pp. 77-91
- [8]. *Math Comput Simul* 79 (9):2957-2966
- [9]. Palac-McMiken, E. D. (1997). An examination of ASEAN stock market: A cointegration Approach. *ASEAN Economic Bulletin* 13(2), 299-311.

- [10]. Phuan, S.M., Lim, K.P., Ooi, A. Y.,(2009) “Financial Liberalization and Stock Markets Integration for Asean-5 Countries”, International Business Research Vol.2, No.1.