

Project # 1:
Research Paper - Literature Review

How would the inclusion of Local Malaysian in emerging market influence the country's stock exchange market?

Introduction

The recent classification of Malaysia as an emerging market by MSCI and FTSE will lead to a significant improvement in the Malaysia economy. This step will make Malaysia become the third largest MSCI country from the EMEA region, and it is expected to have a weight of 2.7% in the index that weight more than \$1.9 trillion. This paper aims to predict the impact of the Malaysia inclusion in emerging market by investigating other emerging market with providing more emphasis on GCC emerging countries since they have similar economic conditions. Previous studies have mentioned the factors that cause the market volatility in emerging market. Also, they have mentioned the effect of foreign investment, market liberalization, and how the effect of the development of the emerging market on the economic growth.

Literature Review

Stock volatility is one of the main features of emerging markets. Some literature examined the effect of US stock market return and exchange rate changes on stock market volatility of emerging countries. Kayral and Karacaer (2017), have examined the effect by analyzing 10 emerging market economies during the time period between 2000 through 2013. The authors analysed separate VAR models for each country and they also have used GARCH and stationarity of the variables are assessed by applying ADF and PP tests. The authors found that the US market return cause stock market volatilities in the studied countries. The authors stressed on the importance of monitoring the stock prices and the factors causing the return as well as the economic development in the US stock market since they have an effect on emerging countries' stock market volatilities.

According to the previous, emerging market experience volatile stock market. Khandaker and Islam (2015), have analyzed market volatility and co-movement behavior of three emerging markets and three developed countries to see how much the market is affected by GFC. The observed period was from 2001 until 2012 using GARCH model and R square metrics. They found that the studies sample of emerging market reveals higher volatility in stock price than developed countries studied and the volatility level increases during the GFC. Moreover, they have found that there are no significant correlations between volatility and co movement behavior in developed countries but there is a relationship in emerging countries. The researchers suggest that macroeconomic factors are significant in the developed economies, however, they don't have a strong effect in emerging markets. This suggestion leads us to another study by Zakaria and Shamsuddin (2012), who studies the relationship between the volatility of stock market return and macroeconomic volatilities (GDP, inflation, exchange rate, interest rate, and money supply) in Malaysia emerging market. The study included the period from 2000 through 2012 using GARCH models to estimate the volatility and the relationship between stock market volatility and macroeconomic volatility were analyzed using bi-variate and multivariate VAR Granger causality tests and regression analysis. The result shows that the volatility of macroeconomic variables as a group are not significantly related to stock market volatility. The authors suggest that the reason behind the result is that emerging market do not depend on institutional investors in their markets and this would cause information asymmetry problem among investors.

To consider the effect of individual and institutional trading in emerging market, a study made by Kuo et al (2015) using Taiwan Futures Exchange. Daily data were used from 2002 through 2005 and the samples contains three of the most actively traded stock index future contracts in Taiwan.

In addition, the study includes many classes of investors: individual, institutional, local, and foreign investors. GARCH model was used for the study and they found that there is a positive relationship between market volatility and individual investors and therefore, it is hard to forecast the market. Moreover, foreign institutional trading forecast and predict the future return more accurately than domestic institutional investors. The author suggests future studies to be made on longer term recent data base.

One study made by Umutlu et al (2010) investigated whether the degree of financial liberalization affects the total volatility of stock returns by considering the time varying of financial liberalization. The data comprise stocks returns listed in Standard & Poor's global index of emerging market for the period from 1991 to 2005 and multiple regressions were used in the study. The study shows negative relation between the aggregated total volatility with the financial liberalization. In addition, the increasing level of financial liberalization the less the impact on the total volatility. The authors suggest a future study would investigate the volatility effect of trading activity by foreign and individual domestic investors when they become available for more emerging market.

Return volatility is one consideration in emerging markets. Another consideration would be speculative bubbles that may occur as a result of the increase in the equity prices. Tran (2016) has made a study to examine the periodically collapsing of stock market bubbles in Asian and Latin American emerging markets from 1990 through 2009 for monthly data of price index and dividends. Non-cointegration test and Residuals Augmented Least Squares (RALS) methods were used. Tran (2017) found that the hypothesis of formation bubbles cannot be rejected. This indicates that stock prices do not reflect its fundamental values in emerging markets. The authors suggest that further studies can use the momentum threshold autoregressive (MTAR) model to detect for periodically collapsing bubbles.

One of the main features of emerging markets is opening the door for foreign investments. Since this paper focus on the potential effects of upgrading Malaysia Arabia to emerging market, Sharif (2016) examined in his paper whether foreign investors have a destabilizing impact on Malaysia stock market in terms of stock valuation, liquidity, and volatility using daily market data from Tadawil stock exchange. The time period of the study is from 2014 through 2016 and it is split into seven months pre period and the last seven months is post period using multiple regression models. The results show that there is no difference in abnormal return between pre and post periods of study. However, there is an increase in price volatility following foreign investments. The author suggests a future studies to examine whether market liberalization contributes to the growth of Malaysia capital market.

Aloui & Hkiri (2014), investigate the short and long run dependencies of GCC markets during the period of 2005 until 2010 using the wavelet squared coherence. The results show higher frequencies of the patterns in the co-movement after 2007 for all GCC markets and they also found

the strong dependence along GCC countries during the last financial crisis. The authors suggest that implementation of the wavelet squared coherence analysis to other markets.

Investigating the effect of foreign investors on market's volatility in another emerging country from the Arab Gulf countries like Qatar, a study was made by Ahmed (2015). The data used were the daily value of stock purchases and sales made by four groups of investors: foreign individual investors, foreign institutional investors, domestic individual investors and domestic institutional investors using *ex post* measure of volatility and using Generalized Methods of Moments estimation technique. The result shows that foreign institutional and individuals have a significant impact on the volatility of the Qatari capital market. The Author recommends that policy makers should revise the current foreign investment legislation to make it more suitable to achieving the countries' vision.

Even though foreign investments increase the volatility as mentioned in the literature, however, Vo (2017) found that one positive impact would be is that foreign ownership improve stock price informativeness. The data used includes all non financial firms listed on Vietnamese stock exchange from the period of 2007 through 2015 and found that the firm return variation as an inverse measure of stock price informativeness by using regression models. The author suggests that the restructuring approach of the government should focus on attracting foreign ownership in local firms.

Moreover, Huang and Shiu (2009) have examined the local effect of foreign ownership in emerging market, in Taiwan, and found that stocks with high foreign ownership perform better than stocks with low foreign ownership even after controlling some variables. The data used are firm level equity ownership from foreign institutions (468 firms) from 1994 to the end of 2001 using multiple regression methods. This finding means that foreign institutional owners have long run information advantage over domestic investors in Taiwan.

One research about foreign investors in newly liberalized emerging market was a study by Jeon and Moffett (2010) that examines the effect of herding by foreign investors on stock return in the Korean market. The authors have made both pre and post liberalization analyses and used three stages least square regression analysis. They found that there is a significant impact of foreign investor herding on stock return while changes in local institutional ownership do not have significant effect on stock return. These findings suggest that foreign institutions tend to buy/sell shares that domestic institutions sell/buy in the herding year.

Prior studies have mentioned that the development in the emerging markets can lead to economic growth. Bayar et al (2014) studied the role of stock market development in economic growth in Turkey during the period of 1999 till 2013 by using the Johanson Juselius test and Granger causality tests. The result shows that there is a relationship between economic growth and stock market capitalization, total value of stock traded, and turnover ratio of stocks. The authors recommended that if other developing countries want to increase their growth, then they should consider developing their stock market.

Another study made by Anwar &Sun (2011) to examine the interrelationship among economic growth, stocks of foreign investment and the stock of domestic capital in Malaysia. The data used was from 1970 until 2007 by using the Generalized Method of Moment model. The result shows

that the financial development in Malaysia significantly affects its stock of domestic capital that contributes to economic growth but it has insignificant effect on economic growth. Based on these results, the authors suggest that there is a need for further financial sector reforms in Malaysia. In addition, Naik & Oadhi (2015) investigate the impact of the development of stock market on the economic growth for 27 emerging economies from the period of 1995 to 2012 using a second generation panel unit root test, to test the stationary properties of the data. The finding reveals that stock market development significantly affect economic growth. The result suggests that a well functioning stock market and a globalized economy can improve the growth in those emerging economies.

Previous studies show that in terms of market volatility, US market return increase the volatility in emerging market. Additionally, volatility is higher in emerging market than developed countries. Moreover, there is a negative relationship between liberalization and market volatility. Also, studies show that there is a positive relationship between market volatility and individual investors. In terms of the effect of foreign investment in emerging market, the studies in Malaysia and Qatar shows that foreign investment cause market volatility. Moreover, one study found that stocks with high foreign ownership perform better than stocks with low foreign ownership. Finally, in terms of the relationship between emerging market and economic growth, a lot of studies found that there is a positive relationship between the two factors.

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Table 1: Summary of Literature Review

Author	Title	Research Method	Variables	Findings
Sharif.S (2016)	How Foreign investors influence stock market? The Malaysia Experience	Multiple regression	Daily Malaysia stock market 2014-2016	there is an increase in price volatility following foreign investments.
Tran.T (2017)	Speculative Bubbles in Emerging Stock Markets & Macroeconomic factors.	Residuals Augmented Least Squares	Monthly data of stock index LatinAmerica and Asia)	speculative bubbles that may occur as a result of the increase in the equity prices
Huang.R,Shiu.C (2009)	Local Effects of Foreign Ownership in an Emerging Financial Market	Multiple regression	Firm level equity ownership from foreign institutions 468firms, (1994-2001)	stocks with high foreign ownership perform better than stocks with low foreign ownership
Jeon.J,Moffett.C (2010)	Herding by Foreign Investors and Emerging Market Equity Returns	Three stages least square regression	Stock return in Korean stock market	there is a significant impact of foreign investor herding on stock return
Ahmed.W (??)	Cross-border Equity Flows and Market Volatility: The Case of Qatar Exchange	Generalized Methods of Moments estimation technique	The data used were the daily value of stock purchases and sales made by four groups of investors	foreign institutional and individuals have a significant impact on the volatility of the Qatari capital market
Vo.X(??)	Do Foreign Investors Improve Stock Price Informativeness in Emerging Equity Market	Regression models	non financial firms listed on Vietnamese stock exchange 2007- 2015	foreign ownership improve stock price informativeness
Kayral.I, Karacaer.S (??)	Analysis of the Effects of the US Stock Market Returns and Exchange Rate Changes on Emerging Market Economies' Stock Market Volatilities	Var,GARCH,ADF,PP tests.	10 emerging market economies during the	the US market return cause stock market volatilities in the studied countries

			time period 2000 - 2013.	
Khandaker.S, Islam.S (??)	Volatility and comovement: an analysis of stock markets behavior of selected emerging and developed countries	GARCH model and R square metrics	three emerging markets and three developed countries 2001-2012	the studies sample of emerging market reveals higher volatility in stock price than developed countries studied and the volatility level increases during the GFC
Zakaria.Z, Shamsuddin.S (??)	“Empirical Evidence on the Relationship between Stock Market Volatility and Macroeconomics Volatility in Malaysia	GARCH model, Granger causality tests and regression analysis	Malaysia stock market index from 2000-2012	the volatility of macroeconomic variables as a group are not significantly related to stock market volatility
Kuo,W,Chung. S,Chang.C (??)	The impacts of individual and institutional trading on future returns and volatility	GARCH model	using Taiwan Futures Exchange. Daily data were used 2002 -2005	positive relationship between market volatility and individual investors
Umutlu.M,Akdeniz.L,Salih.A (??)	The degree of financial liberalization and aggregated stock-return volatility in emerging markets	Multiple regression models	stocks returns listed in Standard & Poor’s global index of emerging market for the period 1991- 2005	shows negative relation between the aggregated total volatility with the financial liberalization
Aloui.C, Hkiri.B (??)	Co-movements of GCC emerging stock markets: New evidence from wavelet coherence analysis	wavelet squared coherence	Stock market indexes of GCC countries 2005-2010	show higher frequencies of the patterns in the co-movement after 2007 for all GCC markets and they also found the strong dependence along GCC countries during the last financial crisis.
Bayar, Y., Kaya, A. and Yildirim, M (??)	Effects of stock market development on economic growth: evidence from Turkey	Johanson Juselius test and Granger	Market index of Turkey 1999 - 2013	there is a relationship between economic growth and stock market capitalization,

		causality tests		total value of stock traded, and turnover ratio of stocks
Anwar, S. and Sun, S(??)	Financial development, foreign investment and economic growth in Malaysia	Generalized Method of Moment model	Stock market index of Malaysia. 1970 - 2007	the financial development in Malaysia significantly affects its stock of domestic capital that contributes to economic growth but it has insignificant effect on economic growth
Naik.P,Padhi.P (??)	On the linkage between stock market development and economic growth in emerging market economies Dynamic panel evidence	second generation panel unit root test	27 emerging indexes from emerging countries 1995 - 2012	that stock market development significantly affect economic growth