Faculty of Economics and Business

REGIONAL ECONOMIC INTEGRATION: THE EMERGING MARKET CRISIS AND STOCK MARKET LINKAGES

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Bachelor of Economics with Honours
(International Economics)
2007

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This project is submitted in partial fulfillment of
the requirements for the degree of Bachelor of Economics with Honours
(International Economics)

Faculty of Economics and Business
UNIVERSITI MALAYSIA SARAWAK
2007

STATEMENT OF ORIGINALITY

The work described in this Final Year Project, entitled
"Regional Economic Integration: The Emerging Market Crisis and Stock Market Linkages"
is to the best of the author's knowledge that of the author except where due reference is made.

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ABSTRACT

REGIONAL ECONOMIC INTEGRATION: THE EMERGING MARKET CRISIS AND STOCK MARKET LINKAGES

By

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This study empirically investigates the relationship between the ASEAN-5 stock markets. With the adoption of the monthly price series of Composite Indexes spanning since 1987:1 to 2006:12, the results show that the 1997 Asian financial crisis did significantly affected the integration process of the ASEAN-5 stock markets. One cointegrating vector was found for the pre-crisis period. However, neither the full sample nor the post-crisis period indicates that the ASEAN-5 stock markets are integrated. In addition, there was a short-run causal relationship between the markets whereby Philippines seems to market lead the rest of the ASEAN-5 stock markets except for the Singapore's market. On the other hand, Malaysia is somehow the market follower within this region. Overall, a beneficial international investment portfolio diversification within the context of the ASEAN-5 equity markets does actually exist.

ABSTRAK

EKONOMI INTEGRASI SETEMPAT: KRISIS PASARAN SEDANG MEMBANGUN DAN HUBUNGAN ANTARA PASARAN SAHAM

Oleh

Patricia Oh Swee Ling

Secara empirikal, kajian ini bertujuan untuk mengkaji hubungan antara pasaran saham di ASEAN-5. Dengan menggunakan siri harga bulanan indeks komposit bermula dari 1987:1 hingga 2006:12, keputusan kajian menunjukkan bahawa krisis kewangan Asian 1997 sememangnya mempengaruhi proses integrasi pasaran saham di negara-negara ASEAN-5 secara ketara. Satu vektor kopengamiran ditemui pada tempoh masa pra-krisis. Walaubagaimanapun, sama ada sampel penuh mahupun tempoh masa selepas krisis, pasaran saham ASEAN-5 tidak menunjukkan sebarang perhubungan jangka panjang. Terdapat hubungan penyebab jangka pendek di antara pasaran, dengan Filipina sebagai peneraju pasaran terhadap pasaran saham ASEAN-5 yang lain, kecuali Singapura. Disebaliknya, Malaysia adalah pengikut pasaran di kawasan ini. Secara keseluruhannya, kepelbagaian portfolio pelaburan antarabangsa wujud dalam konteks negara-negara ASEAN-5.

ACKNOWLEDGEMENT

There is so many to thank for in the process of completing this thesis. First and foremost, my supervisor, Dr. Evan Lau, definitely deserve a word of thanks. He had indeed led me with effortless guidance, patience and supervision. Merely ‘thank you’ would never be sufficient to actually express my gratitude.

Next in line, would be none other than the faculty staffs who had journeyed with me till the day of submission. From the day to select a topic, till the submission day, the support staffs had been journeying with me thoroughly. It was surely a long journey for the support staff of Faculty of Economics and Business.

Besides, my friends had been a part of this and they too deserve a word of ‘thanks’. All my friends, whether directly or indirectly, had also been a part of the completion process of my final year project. This study could not have been completed without the help and support of my peers.

Last but not least, I would like to extend my most sincere ‘thank you’ to my family members. Mum and dad, had surely been my support till this very day. And to the rest of my family members, this could not have been successful without your support.

Thank you to all who had made this thesis of mine a success.

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INTRODUCTION

1.0 Introduction

The increasing interests in understanding the nature of relationship among regional and the world economies has brought about various valid economic testing underlying the critical issue of policy implications and implementations in a particular nation, region or towards groups of countries. Besides, the motivation for these economic researches were further stimulated due to the recent developments in both the theoretical and application aspects of economic modeling in order to extend, to prove and to replicate existing works and findings of other economists.

However, more recently, the integrated position of regional and global economies have been of greater sense of interest in economic study nowadays. Defining from the free web Wikipedia encyclopedia, 'integration' is said to be a process of combining or accumulating[1]. In a more general sense, integration is the bringing together of things; such as cultures, religions, and even economies.

The term 'Economic Integration', is used to describe the different aspects of integration between economies. It is said to be the process of combining, bringing

[1] The term integration will be used interchangeably with other terms such as, interdependence and convergence.

together and the togetherness of various economies. Because economies are integrated, these economies will somehow have similarities or being similar (or almost similar) in various aspects of their respective economies. Just based on trade activities for instance, the theory of economic integration suggests that as economies become increasingly integrated, the trade barriers between markets would be diminished.

Looking forward into the macroeconomics as a whole, the awareness that the global economy being somewhat related among nations and between regions are obvious. The world is certainly becoming more and more globalize and integrated. In other words, in time to come, there will be no economy that is able to operate in isolation. As economies integrate among themselves, there will be contagion effects between these economies. This however, depends on the strength of economic dependency and integration within these economies. The greater the integrated relationship in these economies is, an economic event in one results to an immediate spillover effect in another.

With the extensive investigation on international economies linkages, seemingly, among the economies across the globe and also between independent nations, the most integrated economy today is none other than that in the European zone, particularly the European Union (EU). However, with the overwhelming interests on the integration that lies within the South East Asian region, this study would be carried out through the adoption of cointegration modeling across five Association of Southeast Asian Nations (ASEAN) countries' stock markets, namely; Bangkok (BK), Jakarta (JK), Kuala Lumpur

(KL), Manila (MN) and Singapore (SG). These ASEAN-5 countries are in fact the core of the ASEAN, representing almost the entire South East Asia.

1.1 Economic Crisis and ASEAN Equity Markets

Continuous growth in business activities, averagely 4 to 6 per cent growth rate per annum on the real per capita income in the Asian economies since 1960s, attractive foreign direct investments and also the overall boom in these nations' economies, all came to an end following the Asian Financial crisis in 1997.

In July 1997, the Thai's mindset was firstly put to the test. Once they abandoned the currency pegging against the US dollar, the Bank of Thailand was all out fighting hard against many speculators. Through this, interest rates were raised, followed by the tightening of the market liquidity. This had eventually caused Thailand run out of their foreign reserves, and finally a devaluation of the Thai's baht of more than 50 per cent of its value.

In addition to this, the Bank had tried to conceal the actual state of its foreign exchange holdings. This attempt had in fact deceived the domestic and foreign investors through their overstated foreign reserves amount. And it was indeed the most damaging mistake. Once the Bank admitted that the reserves were almost gone, there was another massive run against the baht, wiping off the additional International Monetary Fund (IMF) borrowings (Wong, 1999).

Now, with the dramatic baht devaluation, speculative attacks on investments immediately spread across neighboring regions, affecting countries such as Malaysia, Indonesia, the Philippines and South Korea, badly. Singapore and Taiwan were also affected, but only a minor devaluation in these countries currencies. The dominoes effect here, was somewhat attributed to the fact that these countries fundamental nature of economic problems are remarkably alike, causing neighboring countries to be vulnerable to the similar effect, at the same time.

According to Ryan (2000), the 1993 World Bank policy research had reported in *The East Asian Miracle*, classifying eight high-performing Asian economics (HPAEs) namely Japan; Singapore, Hong Kong, Taiwan and South Korea; as well as Malaysia, Thailand and Indonesia, having outstanding economic growth performances, sustainable up to the mid-1990s. Japan, however, was with the exception. It had clearly resulted towards maintaining its economic stability throughout the financial crisis. Being a matured economy, which was largely due to a remarkably focused economic development thrust since 1960, Japan was indeed a leader with the enviable record of thirty consecutive years, with sustained economic growth.

Though being classified as HPAEs, the crisis did have a major negative impact on many of the Asian countries particularly Thailand and its neighboring countries;

Malaysia, Indonesia, Philippines and even South Korea. However, other classified HPAEs such as Singapore and Taiwan were able to persistently withstand from tremendous pressure of this apparently significant economic downturn.

There are evidences believing that the crisis was an effect of panic reactions by both the domestic and also foreign investors, causing the decline in working capital of many local corporations due to the self fulfilling runs on liquidity (Chowdhry and Goyal, 2000)[2]. These investors, who generated funds mostly through short-term investments in this region, withdrew funds immediately upon awareness that the value of baht depreciated. This subsequently led on to the contraction in the Asian's economy, causing asset prices and currency value to fall.

The 1997 financial crisis in Asia was clearly an unanticipated economic event back then. Before realization, there was a sudden decline in assets prices, as well as the devaluation of the currencies across the region. This henceforth emphasized the role of the banking sector in overcoming asymmetric information especially moral hazard, and the self-fulfilling run on liquidity. Just prior to that, huge sum of foreign direct investment had created the globalization and the integration of many economies. And through this, created the emergence of globalize financial markets too. However, through the existence of the many factors of market imperfection risk as well as market integrations, investment portfolios diversifications among investors are being contracted.

[2] Self-fulfilling run on liquidity is meant as the withdrawal of short-term funds by investors upon panic.

There are two visible characteristics defining the financial crisis namely; (i) sharp devaluation of currency, and (ii) decline in traded equity prices (Chowdhry and Goyal, 2000). Firstly, the devaluation of any currency would enable higher trading of exported goods however, limiting the importing activities due to the higher exchange rates. Secondly, financial crisis would result to a sharp plunge in the stock prices of the equity market caused by the panic reaction of investors, leading towards an advance withdrawal of investment from the share market. With the insufficient international reserves at times like this, a run by foreign investors as well as capital flight by the domestic investors would leave the economy vulnerable, due to sudden outflows of funds.

There was a rapid rise in the flow of capital across countries in Asia-Pacific just prior to the crisis, due to the expected high return from mainly the Newly Industrializing Economies (NIEs) - Malaysia, Thailand, and Indonesia. Then, with the immediate capital flight by investors due to the contagion effect from the depreciation of Thai's baht during the crisis period, resulted towards the stock market main indexes rallied in various stock exchanges, across this region.

1.2 Definition of Stock Market

The term 'stock market' is common, but is still somehow an abstract concept, whereby it adopts a mechanism that enables the trading of corporation stocks. With the distinction from a stock exchange, it is an entity in the business of bringing buyers and sellers of securities together.

The stock market is another means for investment purpose for investors, which enables them towards the diversification of their investment portfolio. In addition, this trading place of securities is also means for corporations in obtaining funding and financing for projects in the development of corporations, besides the common banking loans granted through other financial institutions.

With investors having another investment alternative, buyer of securities, and with business opting for funds – seller of securities, the primary market, provides the basis for transactions of these securities to occur between the investors and corporations in the initial public offering and special issues.

Subsequently, in the stock market, trading of stocks between and among investors would occur due to the speculations, prediction and forecasting that a particular company's stock price would appreciate, and therefore allowing profit taking by these investors through the selling of these stocks.

1.2.1 History of Stock Market[3]

France, during the 12th century, the French King Philip the Fair who created the profession of broker, the *courratier de change*, on behalf of the banks, was concerned with managing and regulating the debts of agricultural communities. They were known as the first broker, the people dealing in the *courratier de change* who were trading with debts.

In the late 13th century, 'Brugse Beurse' was formed due to the institutionalization of the Van der Beurse in1309. This had spread towards Flanders and neighbouring countries. And soon after, 'Beurzen' opened in Ghent and Amsterdam.

Looking forward into the mid 13th century, trade in Government securities by Venetian bankers began. In the 14th century, like the formation of the first Brugse Beurse, the trading of Government securities had spread across other city states too. This cities are those that was not being ruled by a duke, instead a council of influential citizens, Florence, Genoa, Pisa and Verona.

Later, the Dutch started joint stock companies, allowing shareholders to invest in business ventures and get a share of their profits or losses. The Dutch East India Company, being the first company to issue stocks and bonds, had then issued the first shares on the Amsterdam Stock Exchange, in 1602.

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[3] Chapter 1.2.1 History of Stock Market, was adapted from http://en.wikipedia.org/wiki/Stock_market.

It was believed that the Amsterdam Stock Exchange (or Amsterdam Beurs) has been the first of this kind to introduce continuous trading in the early 17th century. They had:

> *"Pioneered in short selling, option trading, debt-equity swaps, merchant banking, unit trusts and many other speculative instruments…"*
>
> - Adopted from Sayle (2001).

Today, in virtually every developed and most developing economy globally, there is the existence of stock markets. Among these, the world largest remain with the United States, United Kingdom, Germany, France and our Asian Japan.

1.3 ASEAN-5 Stock Markets

There are five main economies in the South East Asian (SEA) region. This sub-section will introduce the five stock markets in ASEAN-5; (1) Jakarta Stock Exchange (JSX) in Indonesia, (2) Bursa Malaysia (KLSE) in Malaysia, (3) Philippines Stock Exchange (PSE) in the Philippines, (4) Singapore Exchange (SGX) Singapore and (5) Stock Exchange of Thailand (SET) in Thailand.

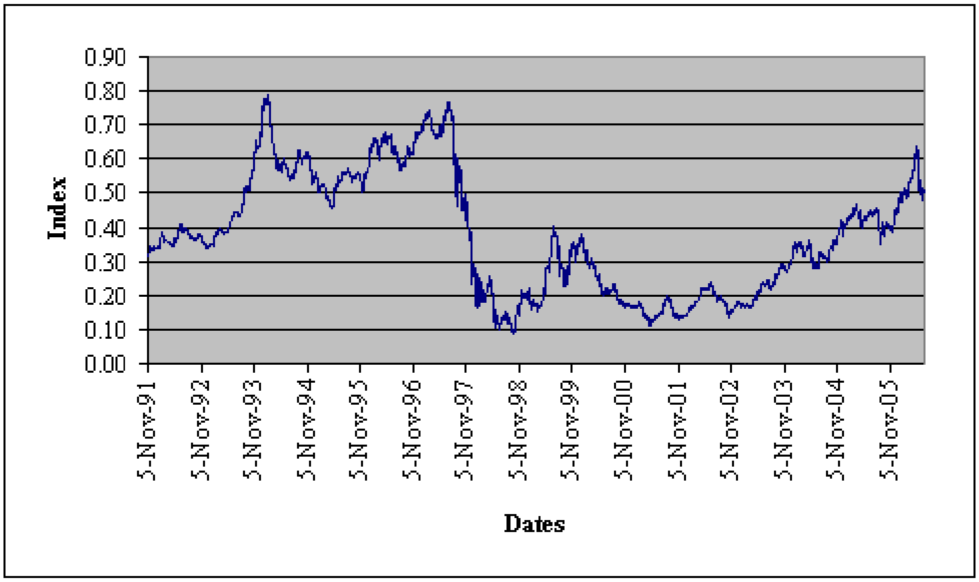
1.3.1 Jakarta Stock Exchange (JSX)

The Jakarta Stock Exchange (JSX) originally opened in 1912 under the Dutch colonial government, and later on re-opened in 1977, after closures during World War I and World War II. Upon reopening, the exchange was under the management of the newly created Capital Market Executive Agency, under the Ministry of Finance. Alongside the development of the Indonesia's financial markets and the private sector, the trading activity and the market capitalization of the JSX grew tremendously. This was highlighted by a major bull run in 1990. The exchange was then being privatized under the ownership of Jakarta Exchange Inc. on July 13, 1992.

Two main primary stock market indices used in the JSX in representing the stock groupings; namely the JSX Composite and the Jakarta Islamic Index (JII). The JII was established in 2002 as a benchmark in measuring market activities based on the Islamic Law- Syariah. Currently, there are approximately 30 corporate stocks listed on the JII.

Figure 1.1 displays the historical trends of the Jakarta Composite Index based on the daily record of Jakarta Stock Exchange closing prices. Being one of the interdependent South East Asian countries in the ASEAN region, Jakarta Composite Index (JCI) plotted its peak and low of its main index about the same time as that of other ASEAN countries, except for Singapore.

Figure 1.1
Jakarta Composite Index Daily Closing



Source: Bloomberg

The highest point recorded since 1991 was 0.79 points, exactly on February 4, 1994, which is a month later compared to the KLCI and the SET Index. The index was fluctuating around the peak since January 1994 though. It only reached the peak in February, 1994. There was also another obvious peak sometime in 1997, just before the crisis and the falling stock market prices. The other peak was recorded during the month of July 1997, at 0.76 being almost as high as the peak of 0.79 points in 1994.

The plunge again, like the other ASEAN countries, was the effect from the Asian financial crisis. The lowest point was recorded throughout the period of both mid September 18, till early October 5, 1998, whereby the index recorded the lowest of 0.09 points.

1.3.2 Bursa Malaysia (KLSE)

The Bursa Malaysia, previously known as Kuala Lumpur Stock Exchange (KLSE) dates back to 1930 where the Singapore Stockbrokers' Association, formal organization dealing with securities in the then Malaya, was set up[4]. This was then re-registered as the Malayan Stockbrokers' Association, but not trading public shares yet.

By 1960, the Malayan Stock Exchange was formed. And in 9th May that year, public trading of shares began. However, only in 1964, that the Stock Exchange Malaysia was officially formed. And later on, with the termination of currency interchangeability between Malaysia and Singapore that The Kuala Lumpur Stock Exchange Bhd (KLSEB) was formed. A new company limited by guarantee, The Kuala Lumpur Stock Exchange (KLSE) took over operations of KLSEB as the stock exchange and was re-named as Kuala Lumpur Stock Exchange in 1994. KLSE was then re-named to Bursa Malaysia in 2004.

Bursa Malaysia consists of a Main Board, Second Board and the MESDAQ, which totals up to a market capitalization of MYR700 billion. The main index for Bursa Malaysia, which is the index in which this study would look into, is the Kuala Lumpur Composite Index (KLCI). Lately, June 2006, a new index, FTSE had been developed.

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[4] The term Bursa Malaysia will be used interchangeably with the term Kuala Lumpur Stock Exchange (KLSE).