ANALYSING FOREIGN INVESTMENT FLOW INTO ASIA EMERGING STOCK MARKETS

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Thematic Paper
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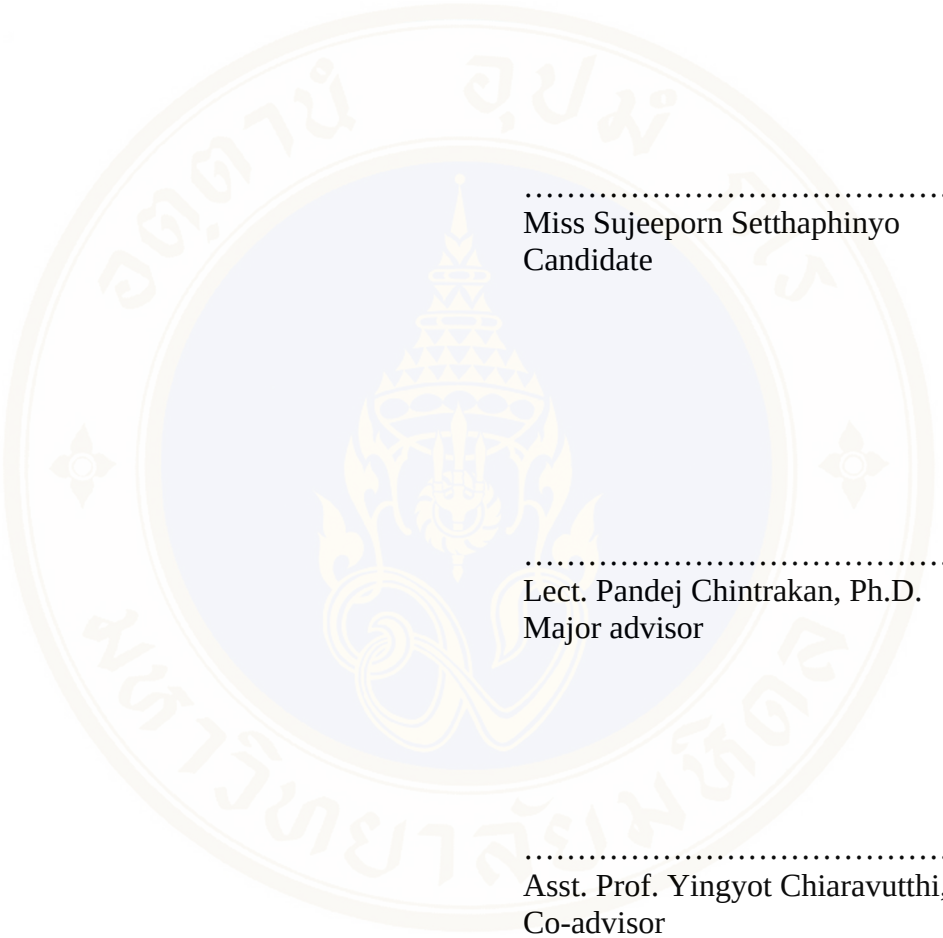

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ANALYSING FOREIGN INVESTMENT FLOW INTO ASIA EMERGING STOCK MARKETS

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ABSTRACT

This paper analyses the behavior of foreign investors on the net purchases in the emerging markets in Asia namely Thailand, South Korea, Taiwan, Philippines, India, and Indonesia.

The purpose of this paper is to find the factors which affect the net foreign flow into these countries. There is a high correlation of net foreign purchases among each country similar to previous studies. The main factor behind this is the change in return and index of the matured markets. Therefore factors that this paper chooses for study are MSCI North America, MSCI Europe, and MSCI AC Asia ex Japan Index.

Data on foreign net flow into the 6 countries used in this study were taken from 2002 to 2008. The results show that the most important factor that can explain the foreign net flow in to these countries is MSCI North America Index followed by MSCI AC Asia ex Japan while MSCI Europe could not explain this relationship.

KEY WORDS: MSCI INDICES/ ASIA EMERGING MARKETS/ FOREIGN SUM FLOW IN/ LAGGED ACCUMURATIVE RETURN

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บทวิเคราะห์การลงทุนของนักลงทุนต่างชาติในตลาดเกิดใหม่ของภูมิภาคเอเชีย

ANALSING FOREIGN INVESTMENT FLOW INTO ASIA EMERGING STOCK MARKETS

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บทคัดย่อ

ในบทวิเคราะห์นี้เราทำการวิเคราะห์บทบาทของนักลงทุนต่างชาติ โดยศึกษาพฤติกรรมการซื้อสุทธิของนักลงทุนต่างชาติในตลาดเกิดใหม่ ของภูมิภาคเอเชียได้แก่ ไทย, เกาหลีใต้, ไต้หวัน, ฟิลิปปินส์, อินเดีย, และ อินโดนีเซีย

จุดประสงค์ของการศึกษาครั้งนี้มุ่งเน้นการสำรวจปัจจัยที่มีผลกระทบต่อการซื้อสุทธิหุ้นในตลาดเกิดใหม่ของภูมิภาคเอเซียที่กล่าวไว้เบื้องต้น จากการศึกษาภาพรวมเบื้องต้นพบว่าพฤติกรรมการซื้อขายสุทธิของนักลงทุนต่างชาติมีการเคลื่อนไหวไปในทิศทางเดียวกันมากขึ้นในช่วงหลายปีที่ผ่านมา โดยปัจจัยที่อยู่เบื้องหลังการเคลื่อนไหวนี้ก็คือการเปลี่ยนแปลงของผลตอบแทนและดัชนีของตลาดทุนขนาดใหญ่ ดังนั้นปัจจัยหลักที่บทวิเคราะห์นี้ได้หยิบยกขึ้นมาทำการทดลองก็คือ ดัชนี MSCI North America, ดัชนี MSCI Europe และดัชนี MSCI AC Asia ex Japan โดยใช้วิธีทางเศรษฐมิติในการวิเคราะห์

โดยบทวิเคราะห์นี้ได้ใช้ข้อมูลการซื้อสุทธิของนักลงทุนต่างชาติใน 6 ประเทศ ตั้งแต่ปี พ.ศ. 2545-พ.ศ. 2551 โดยผลจากการวิจัยครั้งนี้สรุปได้ว่า ปัจจัยที่มีผลกระทบมากที่สุดต่อการซื้อสุทธิของนักลงทุนต่างชาติใน 6 ตลาดเกิดใหม่ของภูมิภาคเอเชียคือ ดัชนี MSCI North America และรองลงมาก็คือ ดัชนี MSCI AC Asia ex Japan ในขนาดเดียวกัน ดัชนี MSCI Europe ไม่สามารถอธิบายความสัมพันธ์นี้ได้ อย่างไรก็ตาม การตั้งสมมติฐานว่าตัวแปรมีความสัมพันธ์เชิงเส้นตรงนี้อาจไม่ถูกต้องในโลกแห่งความเป็นจริง จึงเห็นสมควรถึงการปรับเปลี่ยนแบบจำลองหรือเพิ่มปัจจัยอื่นเพิ่มเติม

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CHAPTER I
INTRODUCTION

1.1 Background of Study

The movement of the capital and investment across the countries has been a main focus for economist to determine the economic policies in many countries. Especially in the emerging countries, apart from the capital and investment within the country, the capital flows from outside of the country has also helped to drive the economy of the country. Nevertheless, uncertainty on the capital inflows can also hurt the economy especially on the capital market which is the main source of capital generation.

For more than decades, many studies have been conducted to find explanatory factors that affect the movement of stock markets worldwide. With a number of new emerging countries with high potential growth in the past decades, there has been a shift in a flow of capital from matured markets around the world. This has made emerging markets become a new highlight that captured many investors' attention.

From figure 1.1, the movement of the capital outside of the country into Thailand has very much reflected in the form of foreign net purchase in the equity market of Thailand. The inflows and outflow of capital have resulted in the movement of the equity index or SET index. This can be seen clearly when the market experiences a foreign net purchase, the SET index closes at the higher closing price. At the same time foreign net out will result in the lower closing price of the market index.

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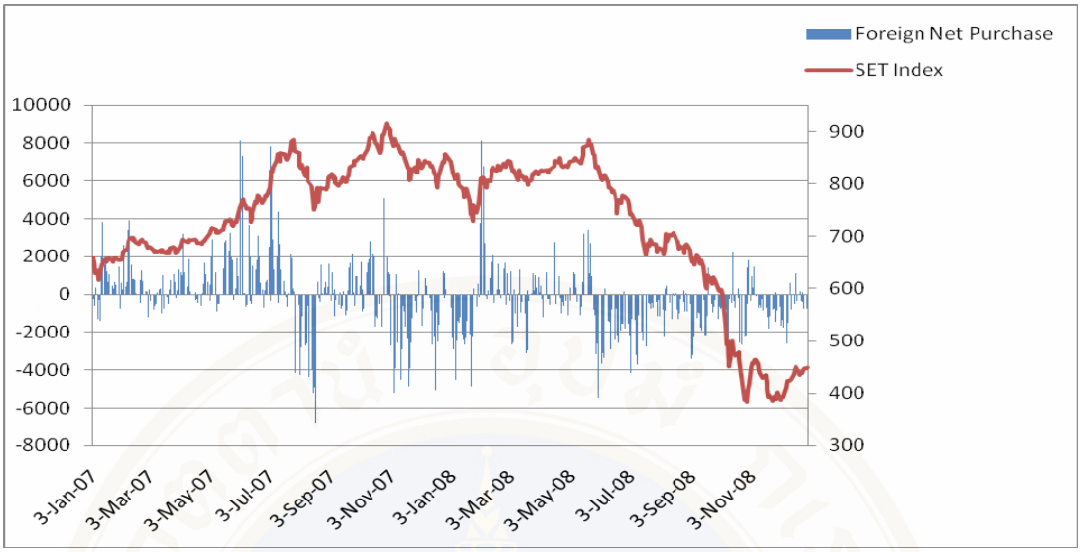

Figure 1.1 Thailand Index and Foreign Net Purchase (2007-2008)

Source: Bloomberg

Not only Thailand, such relation can also be observed in other Asian emerging markets such as Taiwanese market as the figure shown below.

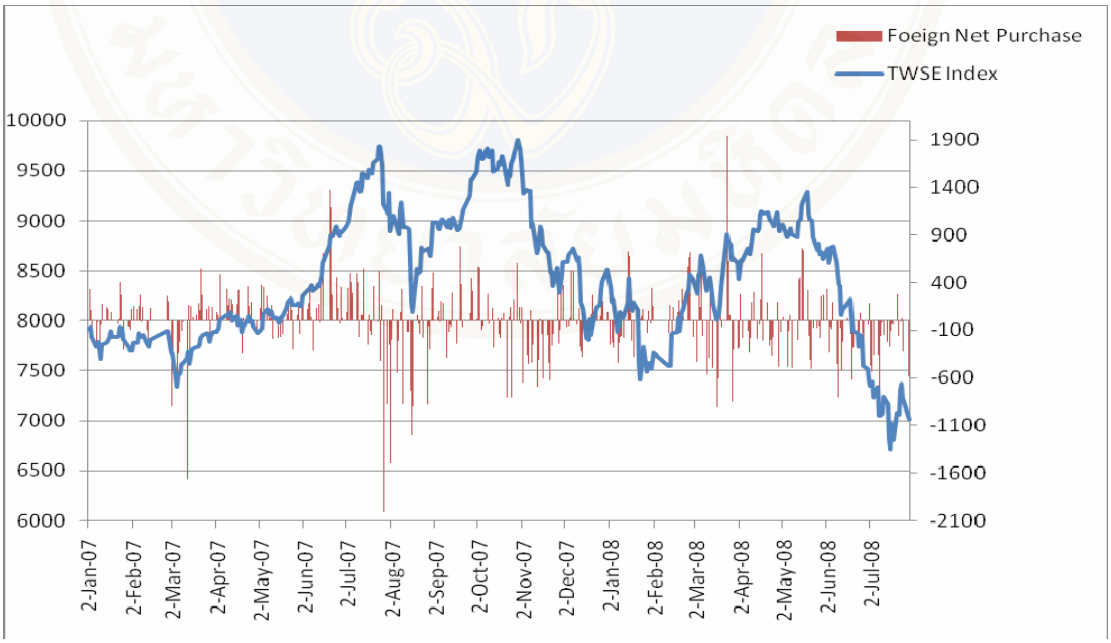

Figure 1.2 Taiwan Index and Foreign Net Purchase (2007-2008)

Source: Bloomberg

Another evidence that has been found which is common among the Asian emerging countries in the past decade is the net foreign purchase in these countries has

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moved in the same direct. This can be observed from the correlation of foreign net purchase in year 2000 in comparison to year 2008 (Table 1.1 and 1.2). The figure shows an increase in correlation among countries in year 2008.

Table 1.1 Correlation of Net Foreign Purchase Year 2000

Country	India	Taiwan	South Korea	Philippines	Thailand	Indonesia
India	1.0000					
Taiwan	0.2068	1.0000				
South Korea	0.1104	0.4836	1.0000			
Philippines	0.0114	-0.0231	-0.0601	1.0000		
Thailand	0.0748	0.1020	0.1545	0.1280	1.0000	
Indonesia	-0.0894	0.0321	0.0050	0.0140	0.0928	1.0000

Source: Bloomberg

Table 1.2 Correlation of Net Foreign Purchase Year 2008

Country	India	Taiwan	South Korea	Philippines	Thailand	Indonesia
India	1.0000					
Taiwan	0.4232	1.0000				
South Korea	0.2474	0.5195	1.0000			
Philippines	0.1103	0.2328	0.2122	1.0000		
Thailand	0.3902	0.5441	0.5230	0.2911	1.0000	
Indonesia	0.1668	1.7090	0.1354	0.0889	0.1201	1.0000

Source: Bloomberg

In this study we are interested in the behavior of foreign investors and a flow of investment into the Asian region especially into the emerging countries such as Thailand, Taiwan, South Korea, India, Indonesia and Philippines. So, what are the factors behinds the movement of investment into these emerging markets? Besides the return within the market, does the external return from other market affect the flow into these countries as well?

Many of previous studies have found a number of factors affecting foreign investors' decision in investing in a particular emerging market. Two of the very significant factors are 1) recent return in the host country and 2) recent return in the mature markets. A study by Richards (2004) on factors affecting the flow of foreign

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investment into emerging markets, found that the conditions in the mature markets or the “push factors”, mainly the return in the mature market itself, as well as the internal conditions of the host county or the “pull factors” are of equal important in explaining the flow of foreign investment into the emerging markets.

Nevertheless, the importance question here is what leads to the phenomenon of foreign net purchase in these countries at the same time? Therefore, rather than focusing on the first factor which is the recent return of individual host countries, this paper will focus on the recent return in the mature markets such as North America, Europe and Asia by using daily return on MSCI indices of each region to determine the net foreign sum flow in to the six Asian emerging markets mentioned earlier on.

1.2 Significance of study

Since equity market is one of country’s magnets that draw a flow of investment from abroad into the country and also one of the indicators that can signal to investors both domestic and foreign on the market and economic situation within the country, it is best for us to understand what lead foreign investment into our equity markets.

As we do aware that flow of investment into the market will drive up the price of the equity and vice versa as well as market index as well as . Decision whether to enter the market by foreign investors is more complex than decision making of the domestic investors where accessibility to information is more of advantage and level to risk exposure is much lower comparing to foreign investors. Therefore knowing the real factors impact the equity inflow and out flow will help investors to enter and exit the market at better timing as well as be able to do portfolio adjustment in timely manner.

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1.3 Objective of the Study

This paper is intended to analyse which of the chosen accumulated return of the three mature markets namely North America, Europe and Asia has the most significant explanatory power to determine the daily foreign net purchase into the six Asian emerging.

With the result of this study, investors will understand which mature markets does affect the movement of the flow of foreign investment into these six countries the most as well as to be able to determine the direction of the moving index and be able to plan for portfolio adjustment and investment strategy.

1.4 Scope of the Study

This paper investigates if variables such as lagged accumulative returns of MSCI North America, MSCI Europe and MSCI AC Asia ex Japan during the period of year 2002 to year 2008 can determine the daily foreign sum flow in to the six countries and which of these three factors has the highest explanatory power over the daily flow.

The data used in this study consist of daily foreign net purchase from stock exchange of Thailand, Taiwan, South Korea, India, Indonesia and Philippines and closing indices of MSCI North America, MSCI Europe and MSCI AC Asia ex Japan.

1.5 Benefits

The study of this paper will allow both local as well as foreign investors to have a better understanding on the foreign investment flows into the equity market of this region consists of six Asian emerging countries. With the results from this study, investors can predict the trend of the market and decide on the timing of entering and withdrawing from these equity market on the timely basis and enable to maximize their return on portfolio. Apart from this, investors will be able to have a clearer focus on which factors they have to pay special attention to and which factors they have to keep their close eyes on in order to have correct marketing timing.

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CHAPTER II
LITERATURE REVIEW

With an increasing in accessibility to news and information around the world, investors can obtain information across different markets and allow them to make investment decision on time. According to Fama (1970, 1991) and his Efficient Market Hypothesis, efficient stock markets react to news in different forms and market prices reflect all available information. Different types of news and information can lead to different impact on the equity markets. For instance, information on the return in the domestic markets as well as return on mature markets has become one of significant impact on the flow of foreign investors.

For the past decade, emerging markets and developing countries have been a main focus for investors all over the world due to their potential growth and attractive return. According to Richards (2005) whom has analyzed daily trading data of all foreign investors in six Asian emerging equity markets found that foreign trading volume flows into emerging market after the positive return in global market as well as domestic markets. This behavior has suggested that foreign investors enter these markets by using recent information on the return. With his study, Richards suggest that foreign investors as well as external factors do contribute a very large impact on emerging markets. Moreover, he also found that both external and internal market conditions are of equally important in explaining the flow of foreign investment into the equity markets.

In the past there have been several studies conducted to investigate the relationship between the flow of the foreign investment into equity markets and the return of the markets. One of which is conducted by Bohn and Tesar (1996) by using monthly data. The result obtained shows that there is a positive relationship between equity flow and the market returns. At the same time, equity flow tends to increase as the return in the market starts to rise, vice versa. Later studies using weekly and daily data were conducted by Froot, O'Connell, and Seasholes (2001) and Griffin, Nardari

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and Stulz (2004) which also arrives at the same conclusion on the positive relationship between equity flow and the market returns. This relationship is indicated as “return chasing” or in other words “momentum trading”.

One explanation to the return chasing is mentioned by Chai-Anant and Ho (2008). Investors used information on the recent past return to form an expectation on the future performance. Thus, there will be a shift in equity flow due to re-allocation. Nevertheless, while many works have reported the positive relationship of the recent past return and the flow of equity, some works for example Hau and Rey (2004), a study of monthly data of equity portfolio flows between US and five industrial economies, has reported negative relationship between the two which is often referred as “portfolio rebalancing”. In this case, investors will restore the portfolio optimal by adjusting or reallocating their funds or asset in their portfolio that have appreciated in value to those that still depreciated.

Nevertheless, not only the recent return that the cross-border investors will take into consideration and causes the impact to the flow of the equity from one market to another, the exchange rate does play its role in their consideration especially the change in the exchange rate which contributes in term of total returns for the foreign investors. In this area of study, Souriounis (2003) discovers that there is a link between capital flow and the exchange rate movement and suggests that equity flows are significant explanation to the exchange rate.

Even though the studies on the flow of equity and exchange rate are not as many as studies on the flow and the market return, but we cannot deny the linkage of the flow and the exchange where the flow of investment is one of the main determinants of the short-term exchange rate fluctuation. Especially in Asian emerging markets where the Sian currency has appreciated against US dollar since 2003 and reaches their highest point.

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CHAPTER III
DATA AND METHODOLOGY

3.1 Data

The markets studied in this paper are equity markets of Asian emerging countries selected from MSCI Emerging Markets definition. Due to insufficient on data available during the chosen period of study, we are only able to obtain complete information of the six countries namely Thailand, Taiwan, South Korea, Philippines, Indonesia and India. A set of data used in this study include 1) daily foreign net purchase of each market and 2) daily closing index of MSCI North America, MSCI Europe and MSCI AC Asia ex Japan. The time period of this study starts from 2002 till 2008. All of the data were obtained from Data Stream and Bloomberg.

The dependent variable that we want to determine is a net foreign sum flow in to the six countries mentioned which in this case refer to Thailand, Taiwan, South Korea, India, Indonesia and Philippines. The data used is the daily foreign net purchase of each market which reported in value of million of USD. All of the daily foreign net purchase of each market is then sum together in order to get daily net sum flow into the region.

In term of independent variables, they are MSCI North America index, MSCI Europe index and MSCI AC (All Country) Asia ex Japan. According to the top major stock exchange in the world base on market capitalization in billion of USD (refer to Figure 4), New York Stock Exchange of United Stated has the highest market capitalization follow by Tokyo Stock Exchange (Japan), NASDAQ (USA) and Euronext (Europe). To take a closer look, the major markets in the world are mainly located in North America, Europe and Asia. To find representative for these regions, we use MSCI indices as representatives. For markets in USA, we used MSCI North America index to represent the markets. As for United Kingdom and other major markets in Europe, this paper uses MSCI Europe index as representative. For major

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Asian markets, MSCI AC Asia ex Japan index will be used to representative these markets. The MSCI indices are the widely use indices of MSCI Barra, a leading provider of investment decision support tool to financial and investment institutions around the world. The indices used as benchmarks to measure performance or return on investment.

Table 3.1 20 Major Stock Exchanges

Country	Stock Exchange	Market Capitalisation (USD Billion)	Trade Value (USD Billion)
United State	New York Stock Exchange	11838	17521
Japan	Tokyo Stock Exchange	3306	3704
United State	NADAQ	3239	13608
Europe	Euronext	2869	1935
United Kingdom	London Stock Exchange	2796	1772
China	Shanghai Stock Exchange	2705	5056
Hong Kong	Hong Kong Stock Exchange	2305	1416
Canada	Toronto Stock Exchange	1677	1245
Spain	BME Spanish Exchange	1435	1259
Brazil	BM&F Bovespa	1337	645
India	Bombay Stock Exchange	1307	264
Germany	Deutche Borse	1337	645
Australia	Australian Securities Exchange	1225	799
India	National Stock Exchange of India	1225	792
Switzerland	SIX Swiss Exchange	1065	740
China	Shenzhen Stock Exchange	868	2772
Korea	Korea Exchange	835	1570
Nordic Countries	NASDAQ OMX Nordic Exchange	817	697
South Africa	JSE Limited	799	271
Taiwan	Taiwan Stock Exchange	658	905
Italy	Borsa Italiana	656	948

Source: World Federation of Exchange

The MSCI North America index itself represents 693 listed companies in USA and Canada. As for the MSCI Europe, the index represents 463 listed companies in 16 developed markets in Europe. Some of which are France, Italy, Germany, Spain and United Kingdom. Whereas the MSCI AC Asia ex Japan index consists of 10

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developed and emerging markets in Asia namely, China, Hong Kong, India, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand. Out of the 10 countries, 6 are the countries that we used in this study.

Moreover all of the three indices are the free-float adjusted market capitalization indices. Apart from that, by using the closing price of each MSCI index, we then calculate for the five days accumulative return.

Due to each markets studied in this paper has different public holidays as well as different operational dates which resulting in differences in trading days, therefore this paper only uses the data that all the markets operated for the test rather than assuming the same price for the date that the market closes.

3.2 Model and Methodology

The empirical model uses in this study is a linear relationship which determines the net foreign sum flow in to all of the sample markets study in this paper by using three independent variables which are lagged accumulative return of each MSCI index for the five periods. The model regress each of MSCI lagged accumulated return of one period as follow;

$$NFSIR_t = \beta_0 + \beta_1 MSCINAACCR_{t-1} + \beta_2 MSCIEUACCR_{t-1} + \beta_3 MSCIPAACCR_{t-1} + \varepsilon_t$$

Where as;

$NFSIR_t$ is net foreign sum flow in of the region at time = t

$MSCINAACCR_{t-1}$ is MSCI North America 5 periods accumulative return at time = t-1

$MSCIEUACCR_{t-1}$ is MSCI Europe 5 periods accumulative return at time =t-1

$MSCIASACCR_{t-1}$ is MSCI AC Asia ex Japan 5 periods accumulative return at time =t-1

For the MSCI accumulative return for 5 period of all the three MSCI indices at time = t can be calculated as follow;

$$MSCIACCR_t = \frac{MSCI_t}{MSCI_{t-5}} - 1$$

The hypothesis of the test for beta 1 is;

$$H_0 : \beta_1 = 0$$

$$H_1 : \beta_1 \neq 0,$$

The hypothesis of the test for beta 2 is;

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$$H_0 : \beta_2 = 0$$
$$H_1 : \beta_2 \neq 0,$$

The hypothesis of the test for beta 3 is;

$$H_0 : \beta_3 = 0$$
$$H_1 : \beta_3 \neq 0$$

For this model, we set up three hypotheses to test the significant of the three parameters in the model which are MSCI North America, MSCI Europe and MSCI AC Asia ex Japan index. This test of significant will explain if each parameter can relatively explain the dependant variable or net foreign sum flow in of the region.

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CHAPTER IV
EMPIRICAL RESULTS

4.1 Introduction

This section shows the empirical result using the model stated in Chapter 3. The result is obtained by the used of STATA application. The number of observations used in this study is 1,054.

In term of descriptive statistic for all the three MSCI indices before we calculate for accumulative return for five periods we found that MSCI AC Asia ex Japan has the highest standard deviation follow by standard deviation of MSCI Europe and MSCI North America. For six years period starting from mid of 2002 to mid of 2008, the MSCI AC Asia ex Japan index can be as high as 2895.05 (November 1, 2007) and can be as low as 1101.77 (April 28, 2003). Whereas standard deviation of MSCI North America is less than half of MSCI AC Asia ex Japan.

Table 4.1 Descriptive Statistic on Chosen Indices during Year 2002-2008

	MSCI AC Asia ex Japan	**MSCI Europe**	**MSCI North America**
Max	2,895.05	2,235.36	1,646.48
Min	1,101.77	726.16	776.83
Average	2,004.33	1,438.91	1,235.97
STD	521.50	420.21	217.10

Same thing happens when we calculate for the five period's accumulative return for each MSCI index. Standard deviation of the MSCI AC Asia ex Japan accumulative return is of the highest. In the opposite, in term of accumulative return of five periods, MSCI North America has a highest return of 0.126506 follow by MSCI Europe Accumulative Return and MSCI AC Asia ex Japan Return.

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Table 4.2 Descriptive Statistic on MSIC Five Periods Accumulative Return during Year 2002-2008

	MSCIASACCR	MSCIEUACCR	MSCINAACCR
Max	0.079296	0.100267	0.126506
Min	-0.09539	-0.10378	-0.087989
Average	0.000854	0.001052	0.000178
STD	0.022274	0.021779	0.018865

Table 4.3 Descriptive Statistic on Net Foreign Purchase of Each Country and Sum Net Purchase of All Six Countries during Year 2002 to 2008 (in million of USD)

	India	Taiwan	Korea	Philippines	Indonesia	Thailand	All Countries
Max	1,431.30	3,786.29	913.85	369.95	538.42	390.19	3,665.60
Min	-841.20	-2,015.68	-1,171.37	-104.68	-2,024.40	-699.47	-3,450.61
Average	29.09	37.85	-31.34	1.38	5.39	2.28	39.58
STD	144.40	265.42	212.32	17.28	81.98	50.89	514.45

As for the net foreign purchase of the six sample countries, Taiwan Stock Exchange has a highest standard deviation of 265.42. The reason that contributes to such a high standard deviation is that during the year 2007 to beginning of the year 2008, there was a large foreign out flow due to many of Taiwanese companies have increasingly sought to list on the Hong Kong stock market. As a result, 10 of Taiwanese companies were IPOs in Hong Kong stock market. Resulting in a significant out flow from Taiwan Stock Exchange during the year 2007 onward. Such evident can be observed from the figure 8 which shows yearly net foreign purchase in Taiwan Stock Exchange starting from year 2002 to year 2008. From the observation, there was a sharp drop in net foreign purchase in year 2007 as well as year 2008.

The largest negative foreign net purchase in Taiwan Stock Exchange with volume of USD 2,015.68 million also occurs in year 2007 on July 7. This contributes to a great amount of sum net foreign purchase of all the six countries on the same day of - USD 3,450.61 millions. In the opposite, the day which has the highest sum flow in to these six countries is also the same day that Taiwan stock market has the highest

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foreign net purchase which is Dec 28, 2005. In summary, the foreign net purchase of Taiwan stock market has greatly influence sum flow into region. Evident of net foreign purchase of each county as well as sum flow in to all the six countries on July 27, 2007 and Dec 28, 2005 can be found in figure 9.

Table 4.4 Net Foreign Purchase of Taiwan Stock Exchange during 2002-2008 (in million of USD)

Year	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**
Sum of Net Foreign Purchase	1,124.07	16,607.95	7,662.73	23,989.51	16,561.48	719	-7,615.9

Table 4.5 Net Foreign Purchase on July 27, 2007 and Dec 28, 2005 (in million of USD)

	India	**Taiwan**	**Korea**	**Philippines**	**Indonesia**	**Thailand**	**All Countries**
July 27, 2007	-299.8	-2,015.68	-935.52	-26.0966	-35.39	-138.12	-3,450.61
Dec 28, 2005	31.7	3,786.29	-142.79	-3.1456	-1.384	-5.07	3,665.60

Besides Taiwan, India and Korea also have very high standard deviation on the net foreign purchase if we would compare with another 3 countries which are Philippines, Indonesia and Thailand. Out of these three countries, Philippines has the lowest standard deviation. Besides, we also observed that out of all the 6 countries above, Korea is the only country that has negative average net foreign net flow.

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4.1 Empirical Result

Table 4.6 Empirical Result

No. of Obs	1054
F(3, 1050)	48.82
Prob > F	0
R-squared	0.2021
Root MSE	460.22

NFSIR	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
mscinaaccr	8424.547	1393.846	6.04	0	5689.506	11159.59
mscieuaccr	1855.894	1333.035	1.39	0.164	-759.821	4471.609
msciasaccr	3223.913	807.8767	3.99	0	1638.677	4809.15
_cons	1.81694	14.43483	2.2	0.028	3.492538	60.14135

The result obtained from the model 1 with the 95% confidence level, enable us to reject the first and third H_0 hypothesis and accept H_1 hypothesis which state that β_1 and $\beta_3 \neq 0$. Meaning that the change in MSCI North America accumulative return and the change in MSCI AC Asia ex Japan accumulative return have a significant impact on the change of the net foreign sum flow in of the region. In another words, both MSCI North America accumulative return and MSCI AC Asia ex Japan accumulative return have a significant impact on the prediction of the model.

Whereas for the second hypothesis, we accept H_0 for $\beta_2 = 0$. Meaning that at 95% confidence level, MSCI Europe accumulative return has less explanatory power on the net foreign sum inflow in of the region. In term of coefficient, keeping other factors constant, one unit increase in MSIC North America accumulative return will result in a change in net foreign sum flow in of USD 8,424.547 millions. At same time one unit increase in MSCI AC Asia ex Japan accumulative return will result in a change in net foreign sum flow in of USD 3,223.913 millions while other factors remain constant.

As for MSCI Europe accumulative return, one percent change in return contribute to lesser change in net foreign sum flow in to the region. In this case one percent increase in return will cause change in net foreign sum flow in of USD 1,855.894, less explanatory power when compare to the other two factor. This is in line with the explanatory power by using the hypothesis test which we have proven

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that MSIC Europe accumulative return does not have significant impact on explaining the dependent variable.

In term of goodness of fit of this model, the R-square is considered very low. Meaning that only 20.21% of the predicted value can be explained by the three independent variables. Another 79.79% is explained by other unknown factor. In general R-square should not be less than 0.75 for the model to be considered as acceptable. However, in this paper we are focusing on which of the three factors used in the model can explain the net foreign flow in to the region better. Therefore we will focus mainly on the explanatory power of each dependent variable.

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CHAPTER V
CONCLUSION

5.1 Introduction

The objective of this paper is to find the factor that can determine foreign net purchase into 6 studied countries in Asia Pacific region which are Thailand, Taiwan, South Korea, Philippines, Indonesia and India. The second chapter has provided the background and previous research that seeks the most accurate factor, especially the recent return in mature markets to determine the foreign investment flow into emerging markets. This paper has brought previous researches to apply in this study. The data and information gathered to run the tested model are explained in chapter three as well as the result of the test which is showed and explained in chapter four. Thus, in this final chapter we aim to provide a summary of the research, explain the limitations of analysis and last but not least make suggestions for further study.

5.2 Research Conclusion

It has showed from the empirical result in the earlier chapter that out of the three factors chosen to determine the net foreign flow in to the 6 countries, MSCI North America accumulative return has the most significant impact on explaining the foreign investment in these 6 countries. One of the reasons that can be explained is that Asia is an attractive investment opportunity where there are many emerging markets with high return in investment due to more potential growth. Whereas markets in North America are mainly matured markets with lesser growth rate.

In term of goodness of fit or the value of R-square which need to be improved, can be done by changing some of the factor especially MSCI Europe index. However, in order to choose a better factor, a study on classification of source and origin of foreign investment flow that comes into each of the country should be

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conducted. In this case we can then determine the factors that need to be added in or factor might need to be dropped out from the model. In this study, MSCI Europe index is not significant enough to explain the foreign investment flow into the 6 countries. This may due to investment that come from European region may be only a small portion when compare to other regions. Having conduct such study, will enable us to determine the factors used in the model better.

Besides the recent return in matured markets, consideration in adding some of macro indicator of the region into the model. However, this might incur with many complication since Asian region consist of many countries with different currencies, economic and political background, as well as fiscal and monetary policy. Unlike countries in some regions such as in Europe, where some of macro factors are common among countries in the regions such as currency used.

Moreover, instead of using simple linear regression which might not be suitable in this studies, a data plot can be conducted prior to see the pattern on the dependent variable in order to determine type of equation needed to be used in order to predict the result more accurately as well as to improve the goodness of fit or the R-square.

Nevertheless, this study is conducted to determine “the trend” of the flow into these 6 markets. In case if a specific forecast is needed, a specific model for each country will be needed which also need to include recent return of that particular market as well.

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APPENDICES

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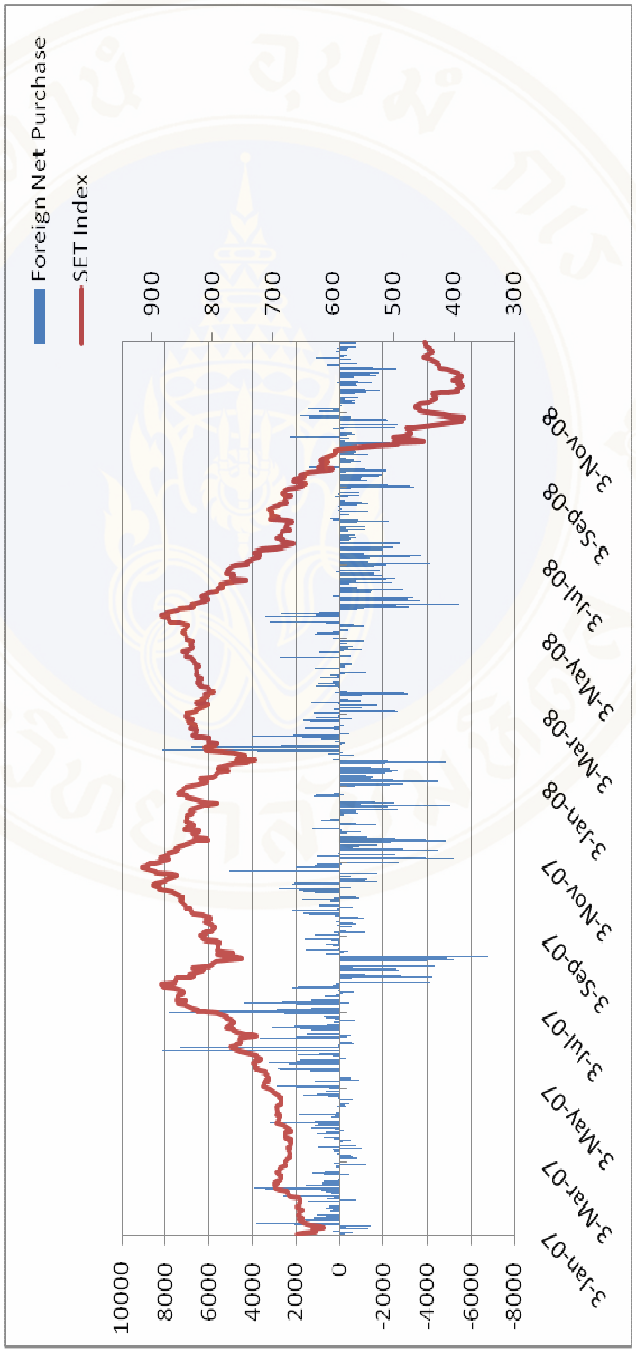
APPENDIX A

THAILAND INDEX AND FOREIGN NET PURCHASE (2007-2008)



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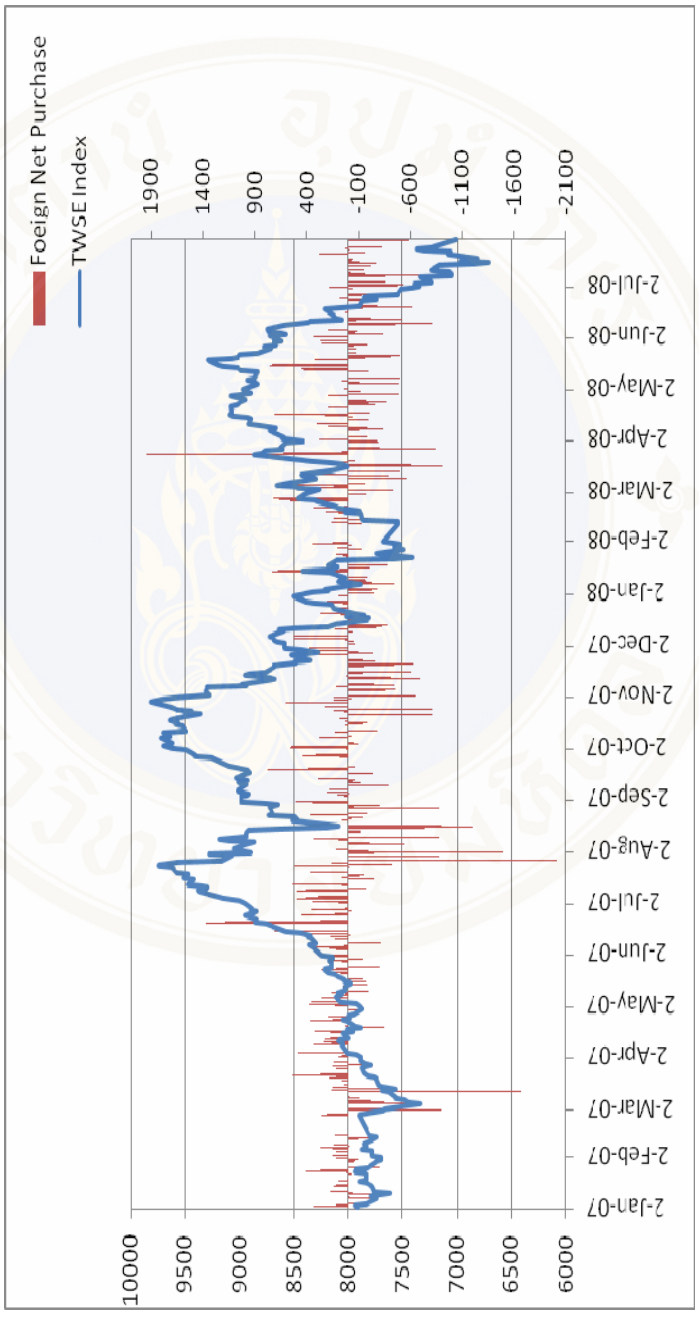
APPENDIX B

TAIWAN INDEX AND FOREIGN NET PURCHASE (2007-2008)



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