

**THE IMPACT OF RINGGIT DE-PEGGING
ON THE MALAYSIAN CAPITAL MARKET**

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ABSTRACT

The sudden announcement on July 21 2005 by the Central Bank of Malaysia to dismantle the pegging of Malaysian ringgit against US Dollar caused a stir in the Malaysian financial market. This announcement was unexpected as Malaysia has implemented de-pegging almost seven years since September 1998. This policy change motivates us to measure statistically the announcement impact of de-pegging of Ringgit, to investigate its effects on the various sectors of the economy and accordingly, to identify the sectors most significantly affected by the change from the Ringgit fixed rate to floating rate system. Further investigation is conducted to compare between the Malaysian market's reaction to the announcement and other international stock markets such as the stock markets of its trading partners. Selected Malaysian economic variables such as interest rate and exchange rate are tested to determine its relationship with the market return. Statistical tools such as descriptive statistic, Single Index Market Model, correlation and cointegration technique are used in the analysis. Our findings indicate that the investors and overall market responded favorably to the move by the Malaysian government to untie the pegging of RM3.80 to USD1. The announcement resulted in positive raw return and a positive abnormal return of 1.93% and 2.31% respectively. Our result also indicate that the sector that is most effected by the de-pegging is the finance sector which recorded positive raw and adjusted returns of 2.12% and 0.56% respectively. In contrast plantation sector recorded negative raw and adjusted return of -0.5% and -2.05% respectively. We note that Malaysian stock market is less vulnerable to movement of other stock markets such as S&P 500, Singapore, Hong Kong, Jakarta, Philippine and Bangkok during the pegging period. However, Malaysian interest rate is negatively correlated with six out of nine countries with the correlation to US interest rate being the lowest at -0.6481. In contrast it is positively correlated with its trading partners after de-pegging. Overall we find that the continuing support of the investors reflect that it is a good policy decision for Malaysia to move from fixed exchange rate regime to a managed floating rate regime where the Ringgit can find its true value.

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LIST OF ABBREVIATIONS

| | |
|-------------|---------------------------------------|
| AFC | Asian Financial Crisis |
| BNM | Bank Negara Malaysia |
| GDP | Gross Domestic Product |
| MIER | Malaysian Institute Economic Recovery |
| NERP | National Economy Recovery Plan |
| NYSE | New York Stock Exchange |
| KLCI | Kuala Lumpur Composite Index |
| OLS | Ordinary Least Square |
| RM | Ringgit Malaysia |
| RAM | Rating Agency Malaysia |
| USD | United State Dollar |

CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

On July 21, 2005 Bank Negara Malaysia announced with immediate effect, the un-pegging of the Ringgit against US Dollar (USD), six years and 10 months after the introduction of the Ringgit peg at RM3.80 on September 1, 1998. The announcement marks a very important monetary policy decision made by the Malaysian government. It also marks the dismantling of the fixed exchange rate of Ringgit against a single currency USD and replaced by a managed float system based on a basket of currencies. A managed float implies that the value of Ringgit will be determined by economic fundamentals.

The background of the fixed exchange rate of Ringgit could be traced to the six strategies outlined in the New Economic Recovery Plan (NERP). NERP is a comprehensive plan to revive the Malaysian economy after the devastating effects of the 1997 Asian Financial Crisis. On the onset of the crisis, Ringgit was severely attacked by currency speculators, to the extent that Ringgit weakened to its lowest exchange rate level of RM4.88 to USD1 on July 1, 1998. Subsequently, BNM introduced new exchange control rules to insulate the Malaysian economy from the risk and vulnerabilities associated with the contagion effect in the global financial market. These new rules were aimed to contain speculation on the Ringgit and minimize the impact of short-term capital inflows on the domestic economy. The over-riding objectives of such measures

are to regain monetary independence and place Malaysia in a better position to meet the challenges of adverse global developments. A stable exchange rate resulting from these measures were envisaged to provide a more conducive economic and business environment that would attract greater foreign direct investments into Malaysia.

Although the business and the investment communities accepted the fixed exchange rate policy, several financial advisors especially from abroad criticized the policy as being too restrictive and should be removed. However, Malaysia continued with the selective capital control measures and the fixing of Ringgit at the exchange rate of RM3.80 was found to be an effective monetary tool to control currency speculation and restoring or stabilizing the value of Ringgit.

With the emergence of China as the next economic power characterized by relatively cheaper labor costs and a very large market base, Malaysia is increasingly financially vulnerable to remain competitive. Despite suggestions from MIER to go for floating exchange rate, Ringgit remains pegged to USD1 at RM3.80, Hence, the announcement of Ringgit de-pegging in late afternoon of July 21, shortly after China announced a "managed exchange rate" of its Yuan, was unexpected and caught the Malaysian financial market and investors by surprise. The swift move by BNM to dismantle the fixed rate less than half an hour after the Chinese Authority made the announcement appeared to curb uncertainties and speculative activities on the Ringgit from unscrupulous currency traders and market operators.

1.1 Problem Statement

The immediate reaction from the market on the announcement appeared very positive. The steep increase in the Kuala Lumpur Composite Index, which recorded the highest level of 939.69 points in Five years on Friday 22, 2005, suggests a very favorable market response towards the new exchange rate regime. Financial news reported high volume of Ringgit traded in the foreign exchange and money markets (Star 30, 2005). Ringgit was seen to strengthen against the USD1 at RM3.77-RM3.79 and later stabilized at 3.70-75 level. Although much has been said about the immediate benefits of the de-pegging of Ringgit, serious efforts need to be done to scientifically measure its impact on the overall Malaysian economy.

Efficient market theory postulates that stock prices in its semi-strong form, adjust rapidly to the release of all public information and stock market is a barometer of economic performance. Hence, any abnormal return occurred from security price and index differentials would reflect how market (investors) reacts to the information and the test of significance of this abnormal return would indicate the magnitude of the impact of such announcement. To date, we yet to find any reports on scientific investigation of de-pegging of Ringgit. Since the dismantling of the fixed exchange rate regime is a very important monetary policy change taken by the Malaysian government, this vacuum provides a strong motivation for us to undertake this study.

Security analysts' reports do cover the impact of Ringgit revaluation on various sectors (BCB Special Economic Issue, 2005; Tee, Business Star, 22 August, 2005). Nonetheless, these are analysis of anticipated performance of each sector in light of the

new Ringgit rate. Further studies to identify which sector is significantly affected by the announcement are not currently available, whereas findings from these studies are important inputs for firms and investors' investment decisions. This study therefore, attempts to identify these sectors and provide findings that could serve as inputs for decision making.

Another aspect of study is the impact of Ringgit de-pegging on the exchange rate that is, is the floating rate enhances the value of Ringgit against USD and its basket of currencies?. By using the "managed" floating rate, could Ringgit find its true or fair value? A major concern among the market players during the fixed rate regime was the possibility of Ringgit being traded below its fair value relative to its regional trade partners. By de-pegging, could large companies such as Petronas Dagangan and Shell Malaysia Berhad whose exports are traded in USD stand to gain from foreign exchange transactions?. Could financial institutions with large foreign debt exposure reap the benefits of de-pegging?. These are some of the issues that need to be addressed following a monetary policy change.

1.2 Research Questions

- a) To what extent is the impact of the announcement of the de-pegging of Ringgit on the Malaysian economy? How are the reactions of stock market of Malaysia compared to her trading partners on the announcement day?

- b) Which of the sectors of the economy is significantly affected by the change from fixed exchange rate to “managed” floating exchange rate?

- c) Is Ringgit being traded at its fair value after the de-pegging? How does Ringgit performed, relative the currencies of its trading partners?
- d) What are the effects of de-pegging on interest rates? What is the relationship between interest rates in Malaysia compared to other countries?
- e) To what extent selected large companies whose trades are largely in USD benefits from the de-pegging of Ringgit based on its 2004 financial figures?

1.3 Significance of the Study

Malaysia dismantled its Ringgit exchange rate peg against a single currency USD and replaced it by a managed floating exchange rate against a band of currencies. This was announced on 21 July, 2005, six years after operating the fixed exchanged rate. The move represents a strategic change in monetary policy in the Malaysian financial system. In view of its importance to the economic development of Malaysia, the study is timely and much needed to be carried out to provide feedback to the policy makers as to whether the policy change is the right move and that it has brought economic benefits to the Malaysian investment and financial community. What differentiate this study from other reports is that firstly, it addresses the current issue that will continue to be debatable for sometime in the future. Secondly, the empirical findings from this study would substantiate these arguments.

The fixed exchange rate policy has provided 'shield' or protection to our Malaysian imports/export and international trade against fluctuations in foreign exchange rates and foreign exchange and liquidity risk. This is because the exchange rate is fixed at RM 3.80/USD. Although it has its advantages, the fixed rate system has created an 'artificial value' of the Ringgit relative to other currencies. This study would provide evidence that the move to de-peg the Ringgit would remove the 'artificial efficiency'. With the value of Ringgit based on floating exchanged rate of a band of currencies, Ringgit will find its fair value based on the market forces. The removal of the artificial shield would drive firm to be more efficient and competitive. This would lead to an increase in hedging activities and higher demand for risk management. This study contributes information that would provide the public greater understanding of the monetary policy change, its impact, benefits and consequences. In addition, event studies on regulatory announcements are few. We hope this would add to the existing literature in this area, especially relating to emerging markets.

1.4 Objectives of the Study

- i. To measure statistically the announcement impact of de-pegging of Ringgit exchange rate on USD.
- ii. To extend the investigation of the de-pegging on the various sectors of the economy and accordingly, to identify the sectors most significantly affected by the change from the Ringgit fixed rate to floating rate system.
- iii. To make comparison between the Malaysian market's reaction to the announcement and other international stock markets such as the stock markets of its trading partners as listed in (d)

- iv. To investigate the relationship between interest rate of Malaysian financial system relative to its main trading partners.
- v. To assess whether large companies with large foreign debts or USD denominated exports benefit or otherwise from the de-pegging of ringgit at RM3.80 against USD.
- vi. To assess the benefits (short-term analysis) on the Malaysian foreign exchange market by analyzing the Ringgit performance against other currencies of Malaysian trading partners such as China, Singapore, Hong Kong, Taiwan, Indonesia, Thailand, Japan, Korea and USA.

CHAPTER TWO

LITERATURE REVIEWS

Bank Negara Malaysia has announced implementation of prudential measures of continued monetary restraint (BNM Press Release, 28 March, 1997). These measures include selective capital controls and the fixed exchange rate of RM3.80 to USD1 for foreign currency transactions, effective September 2, 1998. There were also other announcements of interest rate reduction and several lending guidelines on credit facilities extended to borrowers.

Further measures were introduced including new exchange control rules. These measures were introduced to safeguard Malaysia from the risks associated to the contagion effects of global financial markets (Abu Hassan, A., 1998). Subsequent to the announcement, Money Changing Act, 1998 was implemented effective October 1, 1998. Under this act, only licensed individuals under Exchange Control Act, 1998 are allowed to trade in foreign currencies.

A new foreign exchange procedure called the Selective Exchange Control Rules was established when the pegging was announced. Among others, the new procedure prohibits the transfer of funds in the external accounts so that no Ringgit can be borrowed by foreigners for speculative activities in overseas markets, a fixed exchange rate for the conversion of Ringgit to USD and the introduction of a 12-month rule to prevent excessive short-term capital outflows. The objective of the peg was to create stability and certainty of key economic parameters to support international trade and investments. The immediate impact of the fixed exchange rate was stability in the foreign exchange market. Another important impact is some financial stability was restored following the

Ringgit peg. Awang Adek (1999) and Munir (1998) reported that the IMF have agreed to accept the decision that under certain circumstances, capital controls are short-term respites from external pressures.

Ariff (2005) suggested that one compelling reasons for the de-pegging is that the dollar would likely to depreciate more in the near future. Many analysts forecast that the US government would like to see the USD depreciate by another 30% by 2008 so that the US current account deficit can be brought down to a sustainable level of 3% of GDP. This means that if ringgit were to remain peg to the USD till 2008 Malaysian export competitiveness will suffer, with the costs of import increase sharply, giving severe impact on inflation. Ariff (2005b) also suggested that a free float of the ringgit will be a very risky option to follow in view of high exchange rate volatility and speculative pressures in the forex market. A managed float with central bank intervention, at its own discretion to iron up short-term fluctuation, would be a practical proposition.

Baljeet Grewal (2005) analysed the impact of de-pegging of ringgit and reported that the move towards managed float system is positive amid healthy economic growth, strong external position and a sound banking system. The benefits of a ringgit revaluation are lower cost of capital expenditures, stronger purchasing power and lower import costs, improvement in government fiscal positions as US denominated debt will be reduced and enhancement in investor confidence which would facilitate the inflows of FDI.

Ang (2005) reported that big caps blue chip companies recorded a sharp rise in their share prices one day after the announcement of the de-pegging. Meanwhile, OSK Research reported that there would still be a net capital outflows in the medium term. On sectoral basis, the companies in sectors that deal with high raw materials imports for

domestic sales (such as consumer, motor, media and airline stocks) will benefit the most from the de-pegging, whilst companies that are export driven are worst hit. Yeow (2005) reported that top ten index-linked stocks such as Telekom Malaysia, Tenaga Nasional, Malayan Banking Bhd, MISC, Public Bank among others recorded price increase following the BNM's announcement of the Ringgit depeg. However, the weak market due to lack of buying orders pushed prices down again.

Contrary to the action by BNM to un-peg Ringgit, Mendell (2005) suggests that the Ringgit should remained pegged to the USD. His rationale was that it is important for Malaysia to keep its Ringgit value stable. Kamiso (2005) reported that Ringgit has started strengthening against currencies of its major trading partners a week before the announcement of the de-pegging of the fixed exchange rate. According to analysts, more short-term inflow of hot money to Malaysia is expected to take advantage of the appreciation on Ringgit. However trade surplus may be reduced due to the lack of competitiveness in export and increase in capital goods' import.

Analysis of the impact on businesses revealed that companies with foreign currency revenue and foreign currency material cost will have minimal impact due to appreciation of ringgit. However companies with foreign currency revenue but local currency material cost would be mostly affected depending on the degree of ringgit appreciation. Further, companies with foreign currency debts would tend to benefit most.

RAM July 2005 opines that any short-term appreciation of ringgit would not exceed 5%. This is because RAM believes that central bank would most likely intervene to correct any excessive swing in order to ensure stability. It expects that major beneficiaries of de-pegging would be companies with ringgit denominated revenue but

which have substantial imported cost components and/or large debt in foreign currencies. Key beneficiaries include food and beverage sectors, power, media and health care. Companies expected to be negatively affected by appreciation of the ringgit following the de-pegged include organizations involved in semiconductors (MPI, Hong Leong Industries), timber (Lingui), plantation (IOI Corporation), glove manufacturing (Supermax) and air freight (Transmile). Based on RAM analysis companies in construction sector such as Gamuda are expected to experience higher foreign exchange risk with the de-pegging of ringgit since these companies are having growing exposure to foreign revenue. Margins would be tightened further. Companies producing consumer products such as Nestle are expected to enjoy approximately 5% increase in gross profit assuming 5% appreciation in ringgit. RAM forecasted that plantation companies, in particular IOI Corporation, would experience slightly negative impact on net profit. However the negative effect of revenue is expected to be offset by lower fertilizer cost and higher interest saving from its foreign currency denominated debts.

Hwang-DBS Vickers Research (2005) suggests that the trade-weighted managed float for the ringgit would pave the way for an immediate appreciation of the ringgit by 2-3% to RM3.68-RM3.72 per USD. It forecasted that the direct impact on market earnings is modestly positive. However the market is expected to be temporarily volatile with the outflows of hot money. The research company also forecasted that beneficiaries of ringgit depegging by importance are food and beverages, media, auto, steel and utilities sectors and companies with large foreign debt exposure like Tenaga, Telekom and Public Bank while plantation, timber, oil and gas and manufacturing expected to be the losers.

CHAPTER THREE

METHODOLOGY

3.0 Data

All data comprising share prices of 956 companies, EMAS index, Composite index, sectoral indices and the Malaysian trading partners stock market indices are collected from Datastream statistical package. This data involving share prices of all stocks listed both on the Main Board and the Second Board, comprised adjusted daily share prices of the 956 companies. The data has been collected for the 3-month trading period beginning from July 1, 2005 to end of September 2005. Since the announcement of de-pegging took place on 21 July 2005 ('the event date'), careful attention was given to the price and market reactions on the event date and the surrounding dates to measure statistically the announcement impact of the lifting of the pegging of Ringgit on USD as in the first objective of the study. Data indices of various sectors enabled us to find out the impact of the announcement on various sectors of the economy in Malaysia and to identify the sector most significantly affected by the monetary policy change. This will answer objective two of the study. The sectors are plantation, finance, construction, consumer, property, infrastructure, industrial, trading and technology. Data on companies listed on MESDAQ was also taken as part of the observations of the de-pegging impact on technology driven companies.

Another type of data that has been collected are world indices of Malaysia's major trading partners such as New York Stock Exchange Index (the United States), Singapore Index (Singapore), Hang Seng Index (Hong Kong), Nikkei 225 (Japan),

Jakarta Index, and Philippine Index and Thailand Index. These data were processed to provide inputs to test market reactions in the bourses of its major trading partners when Malaysia made the decision to announce the de pegging. The results would answer objective three of the study.

Pegging allowed Malaysia to manage her interest rates without worrying about their impact on the currency. Therefore data on interest rates are processed to answer objective four.

Financial data of 99 large companies constituting the KLCI such as Tenaga, Telekom, Petronas and others were collected. Financial data comprises foreign debts, exports, sales figures and foreign exchange exposure. These figures were extracted from the respective companies' annual reports. The purpose is to study the impact of de-pegging on these companies since they have large foreign exposure and hence, susceptible to changes in interest rate and foreign exchange rate. This would answer objective five.

Malaysian microeconomic data such as Gross Domestic Product (GDP) and Consumer Price Index (CPI) from 1991 to 2006 were collected to find out whether the de-pegging policy has any significant impact on the economy.

3.1 Research Design

We employed several statistical techniques to answer the research objectives. Market adjusted return, single index market model and correlations were used to address the impact of de-pegging announcement as in objectives one, two and three. Correlation

and cointegration technique were used to address objectives four. Further to that, ordinary least square regression also used to address objective five.

3.1.1 Market Adjusted Return and Single Index Market Model

We started by processing the data in Excel format arranged according to three important trading days namely July 21, 2005, July 22, 2005 and July 25, 2005. To measure the effects of de-pegging, an event study approach was adopted. Abnormal returns of indices and companies were estimated using market adjusted return as shown in equation (1). The indices of interest are the indices of the different sectors.

$$ER_{it} = R_{it} - R_{mt} \dots\dots\dots(1)$$

where

ER_{it} : Abnormal return associated with de-pegging for index i on event day t .

R_{it} : Actual return of index i on event day t .

R_{mt} : Market return on event day t .

We hypothesized that some sectors will be more affected by the move of ringgit de-pegging than other sectors. Furthermore we also hypothesized that the move would affect firms in the main board and second board differently. Therefore we compared the return of second board and main board to assess the effect of de-pegging on these boards.

To assess the effect of de-pegging on Malaysian market as compared to other regional markets, returns of Composite and EMAS were compared against the returns of stock markets in those regions starting from July 20, 2005 to July 29, 2005. If de-pegging

is good for the economy, we hypothesize that the returns of Composite and EMAS should be larger than the regional indices.

To assess the effect of de-pegging on Malaysian market, single index market model of the following form was also employed.

$$ER_{it} = R_{it} - E(R_{it}) \dots\dots\dots(2)$$

where

ER_{it} : Excess return of index i on event day t and $t = 0$ on July 22, 2005.

R_{it} : Actual return of index i on event day t .

$E(R_{it})$: Expected return of index i on event day t if the event had not occurred.

$E(R_{it})$ would be estimated by the market model as follows:

$$R_{it} = \alpha_i + \beta_i * R_{mt} + e_{it} \dots\dots\dots(3)$$

where R_{it} is the return on Malaysian market, R_{mt} is the return of a global index (MSCI World Index), and e_{it} is the error term. α_i and β_i were estimated based on returns over a 200 day period ending on July 21, 2005. The estimated parameters were then used to compute the $E(R_{it})$ in the window period. The window period is from two days before the announcement to two days after the announcement

3.1.2 Correlation and Cointegration Technique

Pegging removes one aspect of uncertainty, i.e Ringgit fluctuations to USD. Since USD is widely used in international trade, we expect that a firm's performance and subsequently its stock performance to be less affected by movements in the currency market during the pegging period. To test this hypothesis, we look at the correlations between returns on Malaysian stock market to returns of stock markets in this region.

Pegging also affects the interest rates as Malaysia does not have to worry about managing its interest rate to make ringgit steadier. Therefore we would also look at the correlations between interest rates in Malaysia to selected countries in this region and we would also be looking at the effects of US interest rates on Malaysian interest rates through cointegration method.

3.1.3 Ordinary Least Square Regression

To assess the impact of de-pegging on firm performance, a regression model of the following form is estimated

$$R_i = \beta_0 + \beta_1 \ln (\text{absgain}_i) + \beta_2 \ln (MV_i) + e_i$$

where

R_i : the return of firm i on July 22, 2005

$\ln (\text{absgain}_i)$: the natural logarithm of absolute value of gains plus absolute value of losses due to foreign exchange in the fiscal year prior to the de-pegging announcement.

$\ln (MV_i)$: the natural logarithm on the firm's market value on July 21, 2005.

We expect that β_1 should be positive as the greater is the exposure to foreign exchange, the higher is the gain if ringgit is really undervalued as claimed by the forex traders.

The event date in this study is July 22, 2005 since the announcement was made on July 21, 2005 after the close of Bursa Malaysia. However, we would also look at the returns on July 21, 2005 since the Yuan was revalued on that day and many economic analysts in Malaysia had predicted that Malaysia could hold on to the pegging system as long as China does not revalue its Yuan and once China revalues its Yuan, Malaysia has no choice but to follow in its footsteps. Therefore, the event dates of interest are July 21 and July 22, 2005.

CHAPTER FOUR

ANALYSIS AND FINDINGS

Table 1 shows the results of two types of abnormal returns arising from the announcement of de-pegging; the raw return and the market adjusted returns (EMAS Adjusted Returns–EAR and Kuala Lumpur Composite Index–KLCIAR) across industries. The results show that companies of all sectors listed both on the main board and the second board (construction all, finance all, consumer all, industrial all, trading all, properties all, plantation all, infrastructure all) with the exception of technology companies, recorded negative returns, both in terms of raw returns and market adjusted returns on the 21 July, 2005 prior to the announcement. There was no abnormal return as yet because the announcement of the de-pegging was made after the market was closed. The actual impact of the announcement could be seen on the next day, 22 July, 2005 where companies of 7 sectors (except for plantation) recorded positive abnormal returns.

Table 1 also highlights the impact of the event on the sectors. From the results, we observe that the sector most affected by the de-pegging is the finance sector, which recorded positive mean abnormal returns of 0.02117 or 2%. The EMAS index adjusted return for finance sector yields 0.00563 whilst adjusted return based on Kuala Lumpur Composite Index is 0.000192. The positive adjusted return shows that the de pegging is seen as benefiting the companies listed under finance sector. The result is as expected as financial institutions are the organizations that are extensively involved in USD dominated transactions such as their trade finance activities, money market operations, foreign exchange transactions, international lending and hedging instruments such as currency swaps and others. The move to de peg the Ringgit is going to increase the

volatility of the foreign exchange market and consequently, will increase the hedging needs of firms with large foreign exchange exposure.

Table 2 shows that there is no significant difference in means returns between the main board and second board on 22 July, 2005. This suggests that the announcement of the de-pegging has equal impact on both boards of the Malaysian equity market. The positive and significant returns by most sectors provide evidence that Malaysian investors favored the action by the Central Bank to uplift the fixed exchanged rate of RM3.80 to USD1. Hence, this finding fulfills the first objective of the study.

Table 3 shows the difference in means returns between industries. It is noted that finance sector yields statistically significant higher returns compared to construction, consumer, industrial, plantation, technology and firms in the MESDAQ. Both parametric test (as shown in the upper diagonal) and the non-parametric test (indicated by Mann-Whitney test) give a basically the same result. Hence, both tests confirm that finance sector benefits the most from the de pegging. Plantation sector yields return of -0.5%. The rationale for this could be that the prices of the plantation crops are quoted in USD for exports. Since the market perceived that the Ringgit is undervalued, the de-pegging move would lead to an appreciation in the Ringgit value and consequently lower the revenues for plantation sector. The above finding meets the second objective of the study by identifying that the finance sector is the most favorably affected sector while the plantation sector is the most adversely affected sector.

We find that comparison of returns of world indices in Table 4 reveals interesting findings. Based on the weekly returns as at 25/7/2005, the closest to the announcement

date, the bourses that recorded an increase in their index are NYSE (0.0069), Singapore (0.0273), Hang Seng (0.0156), Jakarta (0.0366), Philippine (0.0236), Bangkok (0.0107) and Malaysia [KLCI (0.0271) and EMAS Index (0.0225)]. The result shows Jakarta recorded the highest index growth. However, we are most interested to find out the impact of de-pegging on world bourses on the announcement date (21 July, 2005).

Table 5 shows that on the announcement date of de pegging 6 of the 9 bourses recorded positive returns. There are Shanghai (2.52%), Jakarta (1.27%), Hong Kong (1.14%), Kuala Lumpur (1.93%), Singapore (0.35%) and United State ((0.54%). Nikkei, Seoul and Taiwan recorded negative growth of -0.78%, -0.04% and -0.21% respectively. It appears that Shanghai and Kuala Lumpur reacted strongly to the announcement. The growth in Shanghai index was contributed by the announcement made by the China government to revalue its Yuan while for Kuala Lumpur it is a direct consequent of the de pegging announcement. There was no other significant economic news on that day (NST, Business Times Section, July 23, 2005).

Table 6 shows the abnormal returns of certain Malaysian indices using market model on the days surrounding July 22, 2005. The results show that the abnormal returns range from 1.48% to 2.31% on July 22, 2005 depending on the measure of index. All variables are significant at 1% level. As for the other dates they are not significant, we use 4 indices and they are MSCI Malaysian in RM, MSCI Malaysia in USD, Composite Index & EMAS Index.

The upper diagonal of Table 7 shows correlation between world indices for a 15-year period starting December 1990 to December 2005, while the lower diagonal shows

the correlation between world indices during the pegging period (September 1998 to July 18 2005). Table 8 shows the correlation between indices before the start of Asia financial crisis (December 1990 to June 1997). The correlation coefficient of KLCI to NYSE before the crisis is 0.2638. After the crisis the correlation coefficient decreased to 0.1542. The same trend is noted between KLCI and S&P 500, Singapore, Hong Kong, Jakarta, Philippine and Bangkok. The decreased in correlations between KLCI and these indices during the pegging period shows that our stock market is less dependent on the movement of these indices. This result is more significant given that the correlations among markets increased during the de-pegging period compared to the period before AFC. This means that the markets are fully integrated after September 98. The reductions in correlations are in tandem with the Malaysian government policy to stabilize Ringgit and to curb speculation in the Malaysian market. Based on the result in Table 9 we anticipate that the Malaysian stock market will be more exposed to the movement of other market and world economy following the de pegging. This effect can be supported by the recent increases (of 0.25% each in November 2005 and February 2006) in overnight rate and BLR announced by the BNM.

Table 10 presents the correlations between interest rates in Malaysia and selected countries. Before the AFC, it seems that Malaysian interest rate is not highly correlated with other countries. In fact the interest rate in Malaysia is negatively correlated with six out of nine countries with the correlation to US interest rate being the lowest at -0.6481. This could be seen more clearly in figure 1.

During the pegging period Malaysian interest rates are positively correlated with other countries including the US. However our correlation with the US is again the

lowest. We expect that given that Malaysia has already pegged her exchange rate to the US, the correlation between interest rate of Malaysia and other countries should be low. However this is not a case. A possible explanation is that the interest rates of other countries reached their lowest level during this period, and given that pegging is advantageous during period of high interest rate and the Malaysian government desire to lower its interest rate, the decision of Malaysia to lower its interest rate coincides with the general downward movement in interest rate. Therefore the correlation is positive.

To assess the benefits of de-pegging on large companies, we choose 99 companies. We run the OLS regression as shown in equation four. We expect that the larger the LNABSGAIN the higher is the announcement return. However as shown in Table 11, even though the coefficient of LNABSGAIN is positive, it is not significant. The insignificance of LNABSGAIN might be due to its measurement. ABSGAIN is defined as absolute value of gains plus absolute value of losses.

Table 12 shows the cointegration result using Autoregressive Distributed Lag approach (ARDL) between Malaysian interest rate and other variables such as GDP, inflation, money supply, effective exchange rate and US interest rate. We also include pegging period as the dummy variable in this study. From the table we can conclude that since F statistic for the equation; 1.4563 is below the lower bound of the critical value band (between 2.649-3.805), we cannot reject the null hypothesis of no long run relationship between Malaysian interest rate (DLINTM) and the independent variables i.e US interest rate (LINTUS), GDP (LRGDP), inflation (LCPI), money supply (LM3) and effective exchange rate (LEXRATE). One possible explanation is that interest rates in Malaysia are regulated. Therefore outside pressures do not exert any influence on them.

CHAPTER FIVE

CONCLUSION

This study aims to investigate the impact of ringgit de pegging on the Malaysian capital market. Specifically this main objective is decomposed into five research questions. Below are the summary of our findings to those research questions.

We find that the investors and overall market responded favorably to the move by the Malaysian government to untie the pegging of RM3.80 to USD1. The announcement of de pegging on 22nd July 2005 resulted in positive raw return of 1.93% based on KLCI. The positive impact of the announcement is also evident from the result of Single Index Market Model. Statistically the impact yields positive abnormal return of 2.31% based on regressing MCSI Malaysia denominated in US dollar against MSCI World Index.

As to our second objective, we find that the sector that is most effected by the de-pegging is the finance sector. This sector recorded positive raw and adjusted returns of 2.12% and 0.56% respectively. The possible reason for this positive impact is that investors expect an increase in the volume of finance related activities resulting from market based regime. In contrast plantation sector recorded negative raw and adjusted return of -0.5% and -2.05% respectively. This could be due to fact that the prices of the plantation crops in the contracts are quoted in USD. Since the market perceived that the Ringgit is undervalued, the de-pegging move would lead to an appreciation in the Ringgit value and consequently lower the revenues for plantation sector

Our findings also show that Malaysian stock market is less vulnerable to movement of other stock markets such as S&P 500, Singapore, Hong Kong, Jakarta, Philippine and Bangkok during the pegging period. The reductions in correlations are in tandem with the Malaysian government policy to stabilize Ringgit and to curb speculation in the Malaysian market.

We investigated the relationship between interest rate of Malaysian financial system relative to its main trading partners. Our findings indicate that before the de pegging, Malaysian interest rate is not highly correlated with other countries. In fact the interest rate in Malaysia is negatively correlated with six out of nine countries with the correlation to US interest rate being the lowest at -0.6481. However, during the de pegging period, Malaysian interest rates are positively correlated with other countries including the US. We further investigate the relationship between Malaysian interest rate and its trading partners using cointegration analysis. The result shows that the Malaysian interest rate is not influenced by the US over 1990 to 2005 periods.

Our regression results show that even though foreign exchange exposure positively influenced stock return, it is not statistically significant. This result is based on 99 large companies listed on the Main Board of Bursa Malaysia.

The continuing support of the investors reflect that it is a good policy decision to move from fixed exchange rate regime to a managed floating rate regime where the ringgit can find its true value.

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APPENDICES

Table 1: Returns based on Industries and Boards as at July 21, 2005 and July 22, 2005

| MEAN | RR 7/21/2005 | RR 7/22/2005 | EAR 7/21/2005 | EAR 7/22/2005 | KLCIAR 7/21/2005 | KLCIAR 7/22/2005 |
|--------------------------|-----------------|-----------------|------------------|------------------|---------------------|---------------------|
| Construction: all | -0.00498 | 0.00334 | -0.00280 | -0.01221 | -0.00274 | -0.01592 |
| Construction: main | -0.00350 | 0.00647 | -0.00133 | -0.00907 | -0.00126 | -0.01278 |
| Construction: second | -0.00951 | -0.00630 | -0.00733 | -0.02184 | -0.00727 | -0.02555 |
| Finance: all | -0.00487 | 0.02117 | -0.00270 | 0.00563 | -0.00263 | 0.00192 |
| Consumer: all | -0.00325 | 0.00495 | -0.00108 | -0.01059 | -0.00101 | -0.01430 |
| Consumer: main | -0.00489 | 0.00724 | -0.00271 | -0.00830 | -0.00265 | -0.01201 |
| Consumer: second | -0.00089 | 0.00164 | 0.00129 | -0.01391 | 0.00135 | -0.01762 |
| Industrial: all | -0.00592 | 0.00513 | -0.00375 | -0.01041 | -0.00368 | -0.01413 |
| Industrial: main | -0.00282 | 0.00344 | -0.00065 | -0.01210 | -0.00058 | -0.01581 |
| Industrial: second | -0.00941 | 0.00703 | -0.00724 | -0.00852 | -0.00717 | -0.01223 |
| Trading: all | -0.00728 | 0.01493 | -0.00510 | -0.00061 | -0.00504 | -0.00432 |
| Trading: main | -0.00377 | 0.00838 | -0.00160 | -0.00716 | -0.00153 | -0.01087 |
| Trading: second | -0.01665 | 0.03244 | -0.01448 | 0.01690 | -0.01441 | 0.01319 |
| Technology: all | 0.01230 | 0.00009 | 0.01448 | -0.01545 | 0.01454 | -0.01916 |
| Technology: main | 0.02021 | -0.01600 | 0.02238 | -0.03154 | 0.02245 | -0.03525 |
| Technology: second | -0.00576 | 0.03687 | -0.00359 | 0.02133 | -0.00352 | 0.01762 |
| Properties: all | -0.00587 | 0.01458 | -0.00369 | -0.00097 | -0.00363 | -0.00468 |
| Properties: main | -0.00576 | 0.01465 | -0.00359 | -0.00089 | -0.00352 | -0.00460 |
| Properties: second | -0.01087 | 0.01111 | -0.00869 | -0.00443 | -0.00863 | -0.00814 |
| Plantation: all | -0.00316 | -0.00495 | -0.00098 | -0.02049 | -0.00092 | -0.02420 |
| Plantation: main | -0.00348 | -0.00656 | -0.00131 | -0.02210 | -0.00124 | -0.02581 |
| Plantation: second | -0.00007 | 0.01031 | 0.00210 | -0.00524 | 0.00217 | -0.00895 |
| Infrastructure: all main | 0.00703 | 0.01766 | 0.00920 | 0.00212 | 0.00927 | -0.00159 |
| MESDAQ | -0.00434 | 0.00554 | -0.00217 | -0.01000 | -0.00210 | -0.01371 |

RR : Raw Return

EAR : EMAS Adjusted Return

KLCIAR : Kuala Lumpur Composite Index Adjusted Return

Table 2: Difference in Means (%) Between 612 Main Board Companies and 261 Second Board Companies

| | Main Board | Second Board | P- Value |
|-------------------------|------------|--------------|----------|
| RR 7/21/2005 | -0.3305 | -0.8717 | 0.028 |
| RR 7/22/2005 | 0.7476 | 1.0807 | 0.449 |
| RR 7/25/2005 | -0.2884 | -0.6904 | 0.524 |
| EAR 7/21/2005 | -0.1130 | -0.6543 | 0.028 |
| EAR 7/22/2005 | -0.8066 | -0.4734 | 0.449 |
| EAR 7/25/2005 | -0.2884 | -0.6904 | 0.524 |
| KLCIAR 7/21/2005 | -0.1065 | -0.6477 | 0.028 |
| KLCIAR 7/22/2005 | -1.1777 | -0.8446 | 0.449 |
| KLCIAR 7/25/2005 | -0.3043 | -0.7064 | 0.524 |

RR : Raw Return

EAR : EMAS Adjusted Return

KLCIAR : Kuala Lumpur Composite Index Adjusted Return

Table 3: Differences in Means between Industries as at July 22, 2005

| INDUSTRY | Construction | Consumer | Finance | Industrial | Infrastructure | Plantation | Properties | Technology | Trading | MESDAQ |
|----------------|--------------|----------|---------|------------|----------------|------------|------------|------------|---------|--------|
| Construction | | 0.838 | 0.036 | 0.818 | 0.189 | 0.288 | 0.161 | 0.772 | 0.169 | 0.794 |
| Consumer | 0.410 | | 0.003 | 0.968 | 0.130 | 0.025 | 0.042 | 0.599 | 0.065 | 0.915 |
| Finance | 0.007 | 0.000 | | 0.003 | 0.461 | 0.000 | 0.235 | 0.035 | 0.309 | 0.013 |
| Industrial | 0.247 | 0.611 | 0.000 | | 0.130 | 0.016 | 0.036 | 0.581 | 0.060 | 0.938 |
| Infrastructure | 0.206 | 0.053 | 0.804 | 0.039 | | 0.008 | 0.870 | 0.142 | 0.916 | 0.181 |
| Plantation | 0.018 | 0.033 | 0.000 | 0.057 | 0.005 | | 0.000 | 0.581 | 0.000 | 0.050 |
| Properties | 0.114 | 0.002 | 0.175 | 0.000 | 0.558 | 0.000 | | 0.126 | 0.949 | 0.109 |
| Technology | 0.525 | 0.770 | 0.015 | 0.874 | 0.178 | 0.427 | 0.093 | | 0.130 | 0.575 |
| Trading | 0.659 | 0.063 | 0.002 | 0.008 | 0.189 | 0.000 | 0.097 | 0.276 | | 0.130 |
| MESDAQ | 0.283 | 0.584 | 0.000 | 0.837 | 0.023 | 0.104 | 0.002 | 0.987 | 0.037 | |

Upper diagonal is the p-value of the differences in means between the two industries.

Lower diagonal is the p-value of Mann-Whitney test of differences between the two industries.

Table 4: Comparison of Returns between World Indices (Weekly)

| Date | NYSE COMP | SINGAPORE | HANG SENG | NIKKEI 500 | JAKARTA | PHILIPPINE | BANGKOK | KLCI | EMAS |
|-----------|-----------|-----------|-----------|------------|---------|------------|---------|---------|---------|
| 6/27/2005 | -0.0157 | 0.0042 | 0.0165 | -0.0084 | -0.0242 | -0.0206 | 0.0066 | -0.0062 | -0.0066 |
| 7/4/2005 | 0.0049 | 0.0065 | 0.0001 | 0.0239 | 0.0170 | -0.0753 | -0.0210 | 0.0084 | 0.0035 |
| 7/11/2005 | 0.0189 | 0.0090 | -0.0015 | -0.0024 | -0.0135 | 0.0204 | -0.0432 | 0.0118 | 0.0126 |
| 7/18/2005 | -0.0014 | 0.0031 | 0.0289 | 0.0059 | 0.0044 | 0.0305 | 0.0185 | 0.0063 | 0.0079 |
| 7/25/2005 | 0.0069 | 0.0273 | 0.0156 | -0.0008 | 0.0366 | 0.0236 | 0.0107 | 0.0271 | 0.0225 |
| 8/1/2005 | 0.0106 | 0.0243 | 0.0125 | 0.0135 | 0.0072 | 0.0146 | 0.0233 | -0.0017 | -0.0014 |
| 8/8/2005 | -0.0066 | -0.0074 | 0.0087 | -0.0178 | -0.0167 | -0.0041 | 0.0168 | 0.0104 | 0.0103 |
| 8/15/2005 | 0.0150 | -0.0291 | 0.0236 | 0.0404 | -0.0348 | 0.0158 | -0.0157 | -0.0212 | -0.0194 |

Table 5: Comparison of Returns between World Indices (Daily)

| Date | Shanghai | JSE | Hong Kong | KLCI | Nikkei | Singapore | Seoul | Taiwan | S&P 500 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|
| 29-Jul-05 | -0.00324 | -0.00363 | 0.004568 | 0.003221 | 0.003482 | 0.002715 | 0.005947 | -0.00998 | -0.00767 |
| 28-Jul-05 | -0.00308 | 0.007215 | 0.000774 | 0.002586 | 0.001963 | 0.005386 | 0.010695 | 0.007648 | 0.005603 |
| 27-Jul-05 | 0.015939 | 9.34E-05 | 0.002162 | -0.00403 | 0.008274 | 0.005104 | 0.002228 | -0.00611 | 0.004573 |
| 26-Jul-05 | 0.02622 | 0.007053 | -0.00163 | -0.00436 | -0.0021 | 0.005265 | 0.000826 | -0.00846 | 0.001733 |
| 25-Jul-05 | -0.00088 | -0.00212 | 0.000512 | 0.00016 | 0.00578 | -0.0042 | 0.01441 | 0.006225 | -0.00377 |
| 22-Jul-05 | 0.025171 | 0.012726 | 0.011376 | 0.019253 | -0.00778 | 0.003548 | -0.0004 | -0.00208 | 0.005411 |
| 21-Jul-05 | -0.00041 | 0.014772 | 0.001194 | -0.00224 | -0.00022 | 0.000814 | 0.000233 | -0.00464 | -0.00661 |
| 20-Jul-05 | 0.008843 | 0.010829 | 0.002451 | 0.009759 | 0.002608 | 0.027187 | 0.011267 | 0.002062 | 0.011522 |

Table 6: Abnormal Returns Associated with De-pegging Announcement

| | 7/20/05 | 7/21/05 | 7/22/05 | 7/25/05 | 7/26/05 |
|----------------------|-----------------|-------------------|-----------------|-----------------|-------------------|
| MSCI MAL RM | 0.70% (1.27) | -0.17% (-0.31) | 1.78% (3.21) | 0.24% (0.44) | -0.49% (-0.88) |
| MSCI MAL US\$ | 0.70% (1.27) | -0.17% (-0.31) | 2.31% (4.16) | 1.01% (1.83) | -0.45% (-0.81) |
| CI | 0.69% (1.26) | -0.18% (-0.33) | 1.82% (3.33) | 0.01% (0.02) | -0.49% (-0.89) |
| EMAS | 0.66% (1.32) | -0.16% (-0.33) | 1.48% (2.65) | 0.01% (0.03) | -0.45% (-0.90) |

t statistic in parentheses

Table 7: Correlations between World Indices for Different Periods

| | NYSE COMP | S&P 500 COMP | SINGAPORE | HANG SENG | NIKKEI 225 | JAKARTA | PHILIPPINE | BANGKOK | KLCI |
|-------------------------|------------------|-------------------------|------------------|------------------|-------------------|----------------|-------------------|----------------|-------------|
| NYSE COMP | 1.0000 | 0.9780 | 0.4116 | 0.4442 | 0.3460 | 0.2080 | 0.2811 | 0.2560 | 0.2138 |
| S&P 500 COMP | 0.9693 | 1.0000 | 0.4101 | 0.4543 | 0.3516 | 0.1882 | 0.2634 | 0.2507 | 0.2135 |
| SINGAPORE | 0.4371 | 0.4505 | 1.0000 | 0.6932 | 0.3756 | 0.4616 | 0.5198 | 0.5601 | 0.5062 |
| HANG SENG | 0.4646 | 0.5009 | 0.6830 | 1.0000 | 0.3514 | 0.3946 | 0.4645 | 0.4822 | 0.4659 |
| NIKKEI 225 | 0.3913 | 0.4121 | 0.4478 | 0.5108 | 1.0000 | 0.2087 | 0.1568 | 0.2240 | 0.2665 |
| JAKARTA | 0.2037 | 0.1737 | 0.4074 | 0.3569 | 0.2466 | 1.0000 | 0.4003 | 0.4368 | 0.3522 |
| PHILIPPINE | 0.2644 | 0.2489 | 0.4892 | 0.4010 | 0.2411 | 0.3134 | 1.0000 | 0.4559 | 0.3331 |
| BANGKOK | 0.2647 | 0.2729 | 0.5693 | 0.4896 | 0.3341 | 0.4776 | 0.4569 | 1.0000 | 0.4044 |
| KLCI | 0.1542 | 0.1765 | 0.2935 | 0.3442 | 0.2946 | 0.2279 | 0.1564 | 0.3051 | 1.0000 |

All correlation are significant at the 0.01 level (2-tailed).

Upper diagonal is correlation of indexes from December 1990 to Dec 2005 (783 weeks)

Lower diagonal is correlation of indexes from September 1998 to July 2005 (359 weeks)

Table 8: Correlations between World Indices from December 1990 to June 1997

| | NYSE COMP | S&P 500 COMP | SINGAPORE | HANG SENG | NIKKEI 225 | JAKARTA | PHILIPPINE | BANGKOK | KLCI |
|-------------------------|------------------|-------------------------|------------------|------------------|-------------------|----------------|-------------------|----------------|-------------|
| NYSE COMP | 1.0000 | 0.9939 | 0.3335 | 0.3051 | 0.2981 | 0.0509* | 0.1869 | 0.1832 | 0.2638 |
| S&P 500 COMP | | 1.0000 | 0.3177 | 0.2879 | 0.2858 | 0.0491* | 0.1734 | 0.1633 | 0.2490 |
| SINGAPORE | | | 1.0000 | 0.5772 | 0.3009 | 0.2349 | 0.3394 | 0.4490 | 0.6903 |
| HANG SENG | | | | 1.0000 | 0.1665 | 0.2269 | 0.3467 | 0.3867 | 0.4977 |
| NIKKEI 225 | | | | | 1.0000 | 0.1010* | 0.0155* | 0.0810* | 0.2490 |
| JAKARTA | | | | | | 1.0000 | 0.3519 | 0.1117* | 0.2672 |
| PHILIPPINE | | | | | | | 1.0000 | 0.3312 | 0.3849 |
| BANGKOK | | | | | | | | 1.0000 | 0.4774 |

All correlations are significant at 1% except the ones with *.

Table 9: Correlations between KLCI and World Indices for Different Periods

| | Whole (Dec 90 – Dec 05) | Before AFC (Dec 90 – June 97) | Pegging Period (Sep 98 – July 05) |
|-------------------------|------------------------------------|-------------------------------------------|----------------------------------------------|
| NYSE COMP | 0.2138 | 0.2638 | 0.1542 |
| S&P 500 COMP | 0.2135 | 0.2490 | 0.1765 |
| SINGAPORE | 0.5062 | 0.6903 | 0.2935 |
| HANG SENG | 0.4659 | 0.4977 | 0.3442 |
| NIKKEI 225 | 0.2665 | 0.2490 | 0.2946 |
| JAKARTA | 0.3522 | 0.2672 | 0.2279 |
| PHILIPPINE | 0.3331 | 0.3849 | 0.1564 |
| BANGKOK | 0.4044 | 0.4774 | 0.3051 |

Table 10: Correlations between Malaysian Interest Rate and Other Countries Interest Rates for Different Periods

| | Before AFC Jan 89 - June 97 | Pegging Period Sep 98 - July 05 | De-Pegging Period July 05 - Mar 06 | Whole Jan 89 - Mar 06 |
|---------------|----------------------------------------|--------------------------------------------|-----------------------------------------------|----------------------------------|
| THAI | 0.1251 | 0.8710 | 0.7226 | 0.8752 |
| KOREA | 0.1687 | 0.6490 | 0.7818 | 0.8692 |
| CHINA | -0.5273 | 0.8257 | 0.0000 | 0.8182 |
| JAPAN | -0.1451 | 0.5994 | 0.6316 | 0.3738 |
| TAIWAN | -0.2797 | 0.5957 | 0.7979 | 0.6173 |
| PHIL | -0.1132 | 0.7018 | -0.8307 | 0.5778 |
| SPORE | -0.4831 | 0.4489 | 0.8324 | 0.5045 |
| INDON | 0.3234 | 0.9254 | 0.6432 | 0.5275 |
| US | -0.6481 | 0.3971 | 0.8233 | 0.2906 |

Table 11: Result on OLS Regression

| Regressor | Coefficient | T-Ratio |
|------------------|--------------------|----------------|
| INPT | - 0.15101 | - 0.4713 |
| LNMV | 0.00154 | 1.0409 |
| LNABSGAIN | 0.00017 | 0.6151 |

LNMV : the natural logarithm on the firm's market value on July 21, 2005.

LNABSGAIN : the natural logarithm of absolute value of gains plus absolute value of losses due to foreign exchange in the fiscal year prior to the de-pegging announcement.

Table 12: Cointegration Malaysian Interest Rate

Dependent Variable : DLINTM
 Periods : 1992Q2 – 2005Q2 (53 observations)

| Regressor | Coefficient | T-Ratio |
|----------------------|--------------------|----------------|
| CONSTANT | -2.3367 | -0.3470 |
| DLINTUS (-1) | -0.0908 | -0.8039 |
| DLINTUS (-2) | -0.1029 | -0.9534 |
| DLINTUS (-3) | -0.0232 | -0.1963 |
| DLINTUS (-4) | 0.1148 | 0.8420 |
| DLRGDP (-1) | 0.6044 | 1.0698 |
| DLRGDP (-2) | 0.4588 | 0.7746 |
| DLRGDP (-3) | 0.1509 | 0.2971 |
| DLRGDP (-4) | 0.1711 | 0.3639 |
| DLCPI (-1) | 2.2388 | 0.4069 |
| DLCPI (-2) | -3.2819 | -0.6256 |
| DLCPI (-3) | -2.6399 | -0.5479 |
| DLCPI (-4) | -3.0042 | -0.6685 |
| DLM3 (-1) | -1.6217 | -1.7385 |
| DLM3 (-2) | -1.9658 | -1.8456 |
| DLM3 (-3) | 0.3415 | 0.3325 |
| DLM3 (-4) | -0.6232 | -0.7534 |
| DLEXRATE (-1) | 1.3734 | 2.3629 |
| DLEXRATE (-2) | -0.4022 | -0.6249 |
| DLEXRATE (-3) | 1.3177 | 2.4042 |
| DLEXRATE (-4) | -0.4090 | -0.8325 |
| DMPEG | -0.3193 | -1.7495 |
| LINTUS | -0.0041 | -0.0882 |
| LRGDP | 0.4988 | 1.1071 |
| LCPI | 0.0775 | 0.0286 |
| LMM3 | -0.1426 | -0.2283 |
| LEXRATE | -0.3238 | -0.6026 |
| F Statistic | 1.4653 ((0.238)) | |

DLINTM = Difference in natural log of Malaysian interest rate
 DLINTUS = Difference in natural log of US interest rate
 DLRGDP = Difference in natural log of real GDP
 DLCPI = Difference in natural log of Consumer Price Index
 DLM3 = Difference in natural log of money supply
 DLEXRATE = Difference in natural log of Malaysian effective exchange rate
 DMPEG = Dummy of pegging period