

# **CHAPTER I**

## **Introduction**

### **1.1 Development of Exchange Rate in Malaysia for Last Twenty Years**

In late 1980s, economic boom in Malaysia was supported by significant depreciation of the ringgit Malaysia (RM) against the United States dollar (USD) from late 1985. During this period, the RM has been pegged unofficially to USD for the purpose of semblance of stability and low inflation. With the depreciation of the USD against RM and other East Asian currencies between 1985 and 1995, the RM was depreciated as well, thus effectively reducing production cost as well. In 1990 and 1994 devaluations of China's renminbi had also reduced cost competitiveness of the Southeast Asian newly industrializing countries including Malaysia. From the mid-1995, Yen began to depreciate against USD and this would cause the declining cost competitiveness of Malaysia.

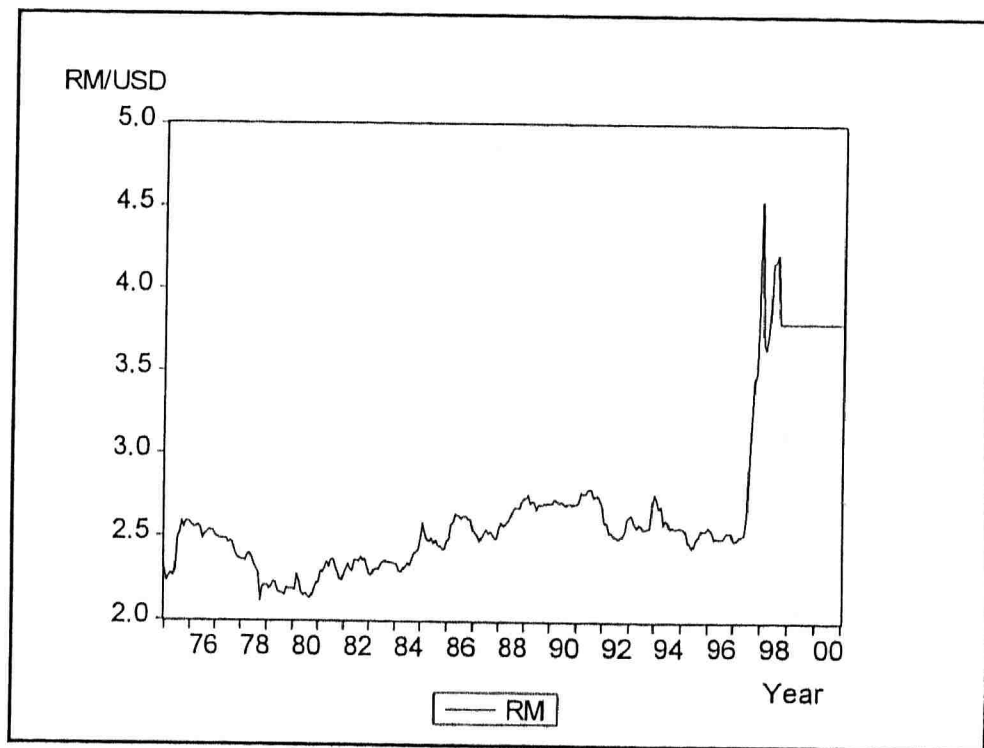
There was widespread consensus that the RM had become over-valued by being pegged to the USD from mid-1995. Hence, the RM was expected to depreciate. From mid-July 1997, RM fell far more than the market expected depreciation of the RM and RM was as high as RM4.88 to USD in the early January 1998 compared to RM2.47 to USD in July 1997.

Since the financial crisis in mid-1997, the unofficial peg of RM to USD had attracted the currency speculators. Thus, this had caused the over-valued RM

depreciated as much as 80% from RM2.47 to USD in July 1997 to RM4.88 to USD in January 1998. RM fluctuated wildly until mid-1998. The RM was fixed at RM3.80 to USD on 2 September 1999.

Movements of the exchange rate of RM against USD from January 1975 till January 2001 is shown in Graph 1.1. It is clearly shown that RM has depreciated from year 1978 to year 1991 with small fluctuations. During the financial crisis in 1997, it shows a sharp depreciation in RM against USD. The RM has stabilized after fixed exchange rate was imposed in September 1998, where the RM is pegged at RM3.80 against USD.

**Graph 1.1 Official Exchange Rate of Ringgit Malaysia Against United States Dollar from 1975:1 to 2001:1**



Source : Monthly Statistical Bulletin, Central Bank of Malaysia

## **1.2 Capital Control Policy**

When the financial crisis started in July 1997, a lot of currency traders borrowed the ringgit Malaysia and sold it down repeatedly. Therefore ringgit Malaysia was devalued rapidly. This had end up with higher price of imported goods, lower real purchasing power and increasing of inflation.

On the other hand, the foreign investors in the stock market began to short-sell their shares through the Singapore operated Central Limit Order Book (CLOB). CLOB traded Malaysian shares without approval from the Kuala Lumpur Stock Exchange (KLSE) or the Malaysian Government.

With registration of all shares held by thousands of investors under the name of a few nominee companies, trading through CLOB did not require registration with the KLSE. The nominee companies were able to lend the shares to speculators who short sell them and caused the prices to plunge. This had caused the composite index of the KLSE went down from 1200 to 260 points.

Because of the depreciation of the ringgit Malaysia and severe fall in share prices, many companies and banks collapsed rapidly and were bankrupted or became nearly so. The government Malaysia also faced revenue shortfalls due to reduction in tax collection and higher foreign debts. If the currency had continued to depreciate, economy Malaysia will be affected badly. Therefore capital control

was a suitable policy in such situation to regain control of the exchange rate of the ringgit and to stop illegal share trading in Singapore through CLOB.

Outflow of ringgit Malaysia especially to Singapore was observed during the crisis. Interest rate was higher in Singapore and outflow of the ringgit Malaysia to Singapore was induced with increasing capital of currency trader who involved in short selling ringgit Malaysia.

To control this outflow of ringgit Malaysia, government decreed if within one month the offshore ringgit in whatever form was not repatriated to Malaysia, it would not be allowed to be brought back after one month. This offshore ringgit was worthless after one month. This forced all offshore ringgits to be repatriated within one month, leaving nothing for the traders to borrow and manipulate. Trading in ringgit Malaysia ceased and the government was able to fix and stabilise the exchange rate at RM3.80 to USD1.00.

To control the short selling activities and illegal shares trading via CLOB, the right of nominee companies to hold the shares of their clients was abolished. All sales of shares must be registered with KLSE in the name of shareholders and sales outside the KLSE are not recognised. Short selling of borrowed shares held by the nominee companies could no longer be done and manipulation of share prices was ceased. The forced repatriation of funds from overseas resulted in

increasing supplies of loans and lower interest rate to stimulate consumption and business activities.

### **1.3 Is Ringgit Malaysia Over-valued or Under-valued after Pegging at RM3.80 to USD?**

The question of whether RM should still be pegged to USD, has remained as an argument. There are points that supporting the over-valued of RM against USD as well as points that suggest the under-valued of RM against USD. Prior to using any econometric methods to estimate the RM, we can have a better understanding on these arguments on RM through a brief discussion on trade balance, international reserve, speculation activities, other Asian currencies and recent bailouts fund required by government Malaysia.

The trade balance of Malaysia has experienced a surplus. 2001:Q2 trade balance surplus is RM12,287 million. Prior to 2001:Q2, the trade balance has been remained positive for consecutive quarters at RM14,951 million (2000:Q2), RM17,179 million (2000:Q4) and RM13,610 million (2001:Q1). Surplus of trade balance suggest the under-valued of RM against USD.

International reserve of Bank Negara Malaysia has increased by RM356 million or USD94 million to RM98.9 billion or USD26 billion as at 15 June 2001 compare to RM98.6 billion or USD25.9 billion as at end May 2001. This is adequate to finance 3.9 months of retained imports and 5.6 times of short term

external debt. Since mid-April 2001, the reserve level has stabilized in the region of USD26 billion. This is a strong point that supporting the strength of RM.

Speculation activities are limited by imposition of capital control since September 1998. This is further supported by illegal offshore RM and limited degree of dollarization in the local economy. Foreign capitalization in KLSE has declined to 15%. Hot money is only around 10% or USD2.3 billion which is under a manageable level. This has strengthened the confidence level of public on RM.

There are also pressures on the pegging of RM to USD. Currencies of Asian trading partner such as Singapore dollar, Thai Baht and Philippine Peso have depreciated by 7-14% since the inception of RM peg in 1998. Singapore dollar has depreciated by 7.3%, Japanese Yen has depreciated by 11.7%, Hong Kong dollar has depreciated by 0.6%, Thai Baht has depreciated by 13.8%, Indonesia Rupiah has depreciated by 8.4% and Philippine Peso has depreciated by 13.5%. Depreciation of other Asian currencies would cause RM relatively more expensive. Exports of Malaysia would be less competitive vis-à-vis other Asian countries. Therefore RM is facing depreciation pressure to maintain competitiveness in international export market.

Although we have trade balance surplus and increased international reserve, but substantial bailouts fund is still a threat to domestic economy. For example, the research of DBS Economic Market Research showed that Employee

Provident Fund bought time.com at RM3.30 with a total amount of RM273 million, with a loss of about RM360 million so far. Future potential bailouts such as Renong (RM5-7 billion), Perwaja Steel (RM10 billion) and LRT (RM2-3 billion), Multimedia Supercorridor affiliated companies (RM10-15 billion) and Bakun dam (RM5-7 billion). Estimated potential funding needs RM40 billion. As the Balance of Payment gap is RM16 billion, so the total funding needs RM56 billion. (Fong 2001)

In view of increasing competitiveness in East Asian countries on the recovery path, an adequate exchange rate level is important to maintain export competitiveness and to encourage the growth of economy. It is really difficult to decide an adequate level of exchange rate based on the above arguments without employing the econometrics method based on the appropriate economic model. Therefore we will study the exchange rate with 3 different economic models.

#### **1.4 Objectives of Study**

This study proposed to study the exchange rates through three different methods namely Big Mac index, Purchasing Power Parity Model and Edwards' Model. Big Mac index is a simple price comparison method to estimate whether the currency is over-valued or under-valued. This is based on the logic of Purchasing Power Parity theory where price of same product should have equal price across the nations.

By using the Purchasing Power Parity model, we extended the study to the exchange rates among Japan, Malaysia, Singapore and United States. Two general price index are used as proxies to study the Purchasing Power Parity model, namely the producer price index or the wholesales price index, and the consumer price index. This method allows us to examine the long-run relationship among the exchange rates and price of Japan, Malaysia, Singapore and United States.

The Edwards' model (Mongardini, 1998) that we proposed is different from Purchasing Power Parity model, where it estimates exchange rates based on the fundamental variables of the economy, the exchange rate policies and external competitiveness. The study is basically to estimate the long-run equilibrium exchange rate of the ringgit Malaysia. This is to give some insight on whether the RM that has been pegged at RM3.80 to USD since September 1998 is over-valued or under-valued.

## **1.5 Summary of Study**

Chapter II of this study employs Big Mac index to discern the estimated exchange rates through comparison of Big Mac prices and exchange rates of the United States and Malaysia. From these estimation we can have a brief overview of the over-valued or under-valued RM against USD.



Chapter III of this study is to estimate the equilibrium exchange rate of the RM vis-à-vis other Asian currencies such as Singapore dollar and Japanese yen. Relative version of Purchasing Power Parity is employed to estimate the equilibrium exchange rate. This theory suggests that the change in the exchange rate over a period of time should be proportional to the relative change in the price level in two nations over the same time period. Cointegration method is used to estimate the exchange rates of the Purchasing Power Parity model for the period of January 1975 till January 1997. Both price indexes, producer price index or wholesales price index and consumer price index are used for cointegration tests among Japan, Singapore and United States. As for Malaysia only the consumer price index is considered. This is because the producer price index for Malaysia is only available after year 1985. Error correction model is used to estimate the short run impact of these variables.

Chapter IV in this study consists of the estimation of the equilibrium of real effective exchange rate using the Edwards' model. The results will indicate whether the real exchange rate is consistent with fundamental of exchange rate before and after the capital control policy. Based on the Edwards' model we look further at the short-run and long-run version of the model. The short-run version consists of fundamental variables such as term of trade, government consumption in percent of gross domestic production, technological progress, ratio of external debt to gross domestic production and lag of real effective exchange rate. Besides these variables for monetary and fiscal policies, such as money supply and interest rate,

capital control dummy is included in short-run model. For the long-run version only fundamental variables are included. Cointegration test and ordinary least squares method is used to estimate the Edwards' model. Augmented Dickey Fuller test is used to test stationarity of the variables prior to cointegration test.

Chapter V gives the conclusion of this study. This chapter also gives a comparison on the results from the three different models namely Big Mac index, Purchasing Power Parity model and Edwards' model.