CHAPTER ONE

INTRODUCTION AND STATEMENT OF PROBLEM

The focus of this thesis is the Malaysian banking system. The banking system in Malaysia consists of the central bank, Bank Negara Malaysia, banking institutions and other financial institutions. The banking system is the largest component, accounting for about 70 per cent of the total assets of the Malaysian financial system (Bank Negara Malaysia, 1999).

In virtually all countries, banks are the core financial intermediaries. As has been stressed by Diamond and Dybvig (1983), banks in all countries share several basic characteristics. They transform maturities by borrowing in relatively liquid and capital-certain instruments demanded by savers, such as demand and time deposits, and using the funds generated to provide credit to borrowing entities. Hence, a sound and efficient financial system is of utmost importance to an economy.

Malaysia recognizes that competition would contribute towards creating a more competitive and efficient financial sector, hence financial liberalization was introduced in 1978. Since then Malaysia has adopted a gradual approach to liberalization. Empirical studies on the impact of financial liberalization in Malaysia are scarce. This thesis represents an attempt to fill this gap.

The structure of this chapter is as follows; section 1.1 and 1.2 highlights the role of the financial system and the aims of financial liberalization respectively. Section 1.3 outlines
some of the benefits and “risks” of financial liberalization. While section 1.4 details the
objectives and hypotheses of this thesis. The scope of this study and the data used is
discussed in section 1.5. Finally, limitations of this study and some suggestions for
future research are given in section 1.6.

1.1 Role of the Financial System

In most developing economies, banks are the major suppliers of credit to finance
productive investments and other debt-financed activities. As an intermediary, banks
perform the crucial function of assessing the expected risks and returns on real sector
projects that underpin the demand for credit, hence, contributing to growth and
development by mobilizing savings and then efficiently allocating these savings across
investment projects. In addition, banks are expected to do a good job of selecting the
most productive recipients for these credits and monitoring them to ensure that they are
being used well.

A well functioning financial system would do a good job of selecting the most productive
recipients for its funds. In contrast, a poorly functioning financial system would allocate
capital to low productivity investments. Financial institutions are said to be allocatively
efficient if they direct resources to the most socially productive use.

Stability is an essential attribute of an efficient financial system. However, within the last
two decades itself, we have witnessed several financial crises that had originated from, or
related to, a banking crisis, both in developed and developing countries. The latest case in
point is the Asian financial crisis that originated in Thailand in mid 1997 and which spread quickly to Indonesia, Malaysia and Korea.

Though the cause and origin of the Asian financial crisis is a subject of controversy, various explanations had been given. Paul Krugman (1998) attributed the crisis to "financial excess and then financial collapse" and that the crisis was precipitated by the bursting of the bubble. The reversal of huge amounts of capital flows was cited as one of the possible factors contributing to the contagion. Jorge and Chen (1998) observed that private capital flows to the five economies most affected – Korea, Indonesia, Malaysia, Thailand and the Philippines - reversed from a net inflow of $93 billion in 1996 to a net outflow of $12 billion in 1997. Their study concluded that the core of the Asian financial crisis was an inefficient financial system.

1.2 Financial Liberalization - The New Orthodoxy in Financial Policy

Developing an efficient financial system is the essence of financial liberalization. Financial liberalization, first mooted by McKinnon (1973) and Shaw (1973) advocates reduced direct intervention of the state in the economy. They believe that interventionist financial policies (such as interest rate ceilings, directed credit program and credit ceilings) result in a repressed system and hence stifle growth. A financially repressed system is described as one in which the government determines who gets and gives credit and at what price. Conversely, liberalization can be characterized as the process of giving the market the authority to determine credit allocation. In other words, they advocate a market-oriented economy using price mechanism to allocate resources.
According to McKinnon (1973) the cost of borrowing in a financially repressed economy can differ from sector to sector; according to each sector's access to the credit market, leading to reduce efficiency in capital allocation. On the other hand, financial liberalization induces the financial market to be more competitive and integrated and would lead to similar costs of borrowing. Hence, if the ineffective and wasteful intervention by the state is done away with, liberalization would raise allocative efficiency.

One of the key reforms of financial liberalization is the freeing of the interest rate regime that would promote savings and efficient investments and deepen financial markets. It would enhance opportunities for savers and lower costs for borrowers; in other words, enhance the role of financial institutions as intermediaries. While more efficient financial intermediation would help to ensure that more productive investments are financed. This would, eventually, help to speed up a country's growth.

The McKinnon-Shaw body of thought is essentially similar to Goldsmith's view on the relationship between the financial system and economic development. Goldsmith (1969) summarized the effects of the financial superstructure on economic development as:

"The financial superstructure in the form of both primary and secondary securities accelerates economic growth and improves economic performance to the extent that it facilitates the migration of funds to the best user, i.e. to the place in the economic system where the funds will yield the highest social returns"
1.3 Benefits and Risks of Financial Liberalization

There exist a number of studies that analyzed how financial development can stimulate economic growth. King and Levine (1993) for example, found financial development to be positively correlated with both current and future growth rates of gross domestic product (GDP), suggesting that financial liberalization, by fostering financial sector development can lead to increased long-run growth rate of the economy. Johnston and Pazarbasioglu (1995) on the other hand found that the efficiency of a financial system impacts mainly on the efficiency of investment while the impact on growth is indirect. In many developing countries, instead of lifting the level of domestic savings and investment, financial liberalization has, rather, increased financial instability. According to Akyuz (1993), liberalization increases the instability of interest rates and asset prices, thereby raising prospects for quick profits through speculation on changes in the market valuation of financial assets.

Besides that, advocates of financial liberalization assert that the rationing regime carried out by monetary authorities such as preferential credit schemes for certain sectors have led to serious resource misallocations. Tybout (1983) attested to this fact based on his survey of Columbian manufacturing firms. He found that the selective credit policy in Columbia favoured large firms while small firms were liquidity constrained. However, over the last two decades, studies that link financial structure and investments have illustrated how asymmetric information can induce rationing in the credit market even in the presence of perfect credit market conditions.

1 See Stiglitz and Weiss (1981)
The many benefits that a liberalized regime would bring, appears to be challenged by the ‘dangers’ and ‘risks’ associated with financial liberalization. Among them is the risk that financial liberalization may not raise allocative efficiency (which is one of the key objectives of financial liberalization). In fact, deregulation may make matters worse by causing the system to respond more flexibly to bad signals. Examples - Chile’s excessive investment in real estate in the 1980s (World Bank, 1990) and Malaysia’s excessive lending to risky projects in the mid 1990s. (Corsetti et. al., 1998).

Besides, liberalization may also lead to increased fragility of the banking system. Ceilings on loan rates discourage risk-taking, as financial institutions cannot charge risk premium. However, with the liberalization of interest rates, banks and other financial intermediaries have more freedom of action, hence increasing the opportunities to take on riskier projects in return for higher profits.

As stressed by Demirguc-Kunt and Detragiache (1998), high-risk and high-return investment projects may not necessarily be undesirable for the economy, if, bank managers have the skill to screen and monitor risky borrowers and to manage a risky loan portfolio. However, evaluation of risky investments and related skills is a complex task, banks in newly liberalized system will likely be deficient in this area. In a study that involved 53 countries, they found that banking crises are more likely to occur in newly liberalized financial systems. However, a World Bank study (World Bank, 1990) cited the inability to replace direct intervention with an adequate system of laws and regulation in the process of deregulation, as the factor contributing to the financial insolvency episodes in the Southern Cone countries, the Philippines and Turkey.
1.4 Objectives of Thesis

This thesis aims to look at the impact of financial liberalization from two aspects. The first aspect pertains to the main objective of financial liberalization; that is, liberalization would raise the allocative efficiency of the banking system. The second aspect pertains to the performance and stability of the banking sector.

In relation to the first aspect, the first objective of this thesis is to analyze the effects of financial liberalization on the allocative efficiency of Malaysian banks. According to liberalization theory, when interest rates and credit allocation are market determined, this will raise efficiency in the financial sector as well as increase productive investments. Hence banking institutions would be allocatively efficient if they allocate funds/credit to the most productive users (high productivity investments).

The efficiency of the banking system in the allocation of credit is difficult to measure directly and empirical research in this area is scarce. However, various indirect methods have been used. These methods have been adapted in this thesis. To achieve the first objective, three hypotheses will be examined, namely:

Hypothesis (1): Funds are allocated to firms that yield maximum economic benefits to the country after interest rates are fully liberalized.

Hypothesis (2): Financial liberalization has improved credit allocation among the sub sectors of the manufacturing industry in Malaysia.
Hypothesis (3): Variation in average borrowing costs across the manufacturing sub sectors has narrowed after financial liberalization has occurred.

Hypothesis (1) will be carried out using firm level data. Social cost-benefit analysis (SCBA) methodology will be adopted for the evaluation of a sample of public listed firms. SCBA will be employed here on an exploratory basis to shed some light on whether funds (loans) are allocated to the efficient firms after interest rates are fully liberalized.

Most efficiency calculations are made for two purposes. Firstly, to decide on the allocation of resources (the planning aspect) and secondly, to evaluate the performance of a project after resources have been committed (the control aspect). This hypothesis looks at the efficient use of funds that have been allocated to the many firms in the Malaysian manufacturing sector before and after financial liberalization. Hence, this thesis basically looks at the control aspect. This is also recommended by Little & Mirrlees (1974) who noted that:

"'post-mortem' evaluation of private sector investment can be enlightening, as the government should find it very useful to know what lines of investment seem to have been socially most valuable"

To determine whether a firm is efficient or otherwise, the investment criteria of net present value (NPV) is used. Since the methodology here is SCBA, hence, the criteria should be present social value (PSV). Analysis of PSV will be carried out based on:

A) stratification according to time period (pre and post liberalization)
B) stratification according to manufacturing sub sectors.
The firms chosen for the above hypothesis are private sector firms listed on the Kuala Lumpur Stock Exchange. The main reason for choosing public listed companies is the availability of the type of data required for the analysis.

Private sector project is like a public sector project, a user of inputs and producer of outputs which can be evaluated using shadow prices by the same method suggested in the traditional SCBA methodology but the sources of investment funds and the uses to which the profits are put, require to be adjusted further (Little & Mirrlees, 1974, page 172). Hence, social evaluation of private investment is more difficult than social evaluation of public investment. Nevertheless, the social evaluation of private sector projects is both feasible and important.

The above method of evaluating allocative efficiency will be supplemented by two other procedures carried out in the second and third hypotheses.

The second hypothesis (pertaining to credit allocation) is carried out with the aim of identifying the manufacturing sub-sectors that benefit from financial liberalization with regards to credit allocation and whether the sub-sectors that received more allocation are the more efficient ones. Rank correlation analysis will be carried out to determine if the sub-sectors that received more loans in the post liberalization period are the more efficient sub-sectors (i.e. with higher PSV values). Data will be obtained from the same firms used in the first hypothesis.

The third hypothesis (pertaining to average borrowing costs) is designed to evaluate whether financial liberalization induces the market to be more competitive, and in the process result in similar costs of borrowing. Following the line of reasoning given by Cho
(1988), borrowing costs across the sub sectors of the manufacturing sector are obtained to determine if variation in borrowing costs between these sub sectors has narrowed after financial liberalization has occurred.

The second aspect pertains to the impact of financial liberalization on the stability and performance of the financial system. Hence the second objective of this thesis is to evaluate the impact of financial liberalization on the performance and stability of banking institutions in Malaysia. Two hypotheses (i.e. the fourth and fifth hypothesis) will be carried out to achieve this objective:

Hypothesis (4): The banking sector’s cost of intermediation has decreased after financial liberalization has occurred.

Hypothesis (5): Financial liberalization significantly increases the probability of a banking crisis when other factors are controlled for.

Hypothesis (4) will be achieved by collecting data from several banks. Cost-ratio analysis along the procedure established by Revell (1980) will be carried out. This analysis will provide information on the banks’ efficiency in resource mobilization. We would expect that with financial liberalization, the banks’ efficiency would have improved, therefore reducing the spread between the rate of return on savings and the lending rate (referred to as the interest margin or cost of intermediation).

Hypothesis (5) will be achieved by using multivariate logistic regression analysis. Logistic regression analysis is conducted to assess the impact of financial liberalization on the probability of a banking crisis when other variables consisting of macroeconomic variables and characteristics of the banking system are controlled for.
Among the control variables that will be used are real gross domestic product (GDP) growth, the ratio of M2 to foreign exchange reserves, credit growth and interest margin. Quarterly data will be used here, for the period of 1990 to 2003.

1.5 Data and Scope of Thesis

This thesis basically concentrates on domestic financial liberalization. As mentioned in 1.2, the centre piece of financial liberalization is the removal of interest rate ceilings which were identified as the primary culprit of repression. Financial liberalization theorizes that freeing the financial market from government intervention would let the forces of market clearing work, resulting in more productive and efficient investments. Hence the first three hypotheses would centre around the allocative efficiency of local firms. While the fourth hypothesis focus on the domestic bank’s cost of intermediation.

However, for the last hypothesis (on financial instability), the aspect of foreign capital inflows is considered in the model. This exception is taken due to the significance of the devastating effects of the sudden large outflows of funds on the affected countries during the recent Asian financial crisis.²

Data for the first three hypotheses will be compiled from public listed private sector companies involved in manufacturing activities. The manufacturing sector is selected because of the leading role it plays in the growth of the Malaysian economy since the late

² Several studies have attested to this, namely, Jorge and Chen (1998), Demigruc-Kunt (1998) and Zhuang (2002).
1980s. In 2003 for example, the manufacturing sector grew by 8.2 per cent compared to the services sector's 4.1 per cent, the agriculture sector's 5.5 per cent and the construction sector's 1.9 per cent.

In terms of contribution to export earnings, the manufacturing sector is unrivalled. It's share of total exports ballooned from 11.9 per cent in 1970 to 58.8 per cent in 1990 and to 82 per cent in 2003. The sector's contributions to the country's GDP and employment are also substantial. Table 2.1 (on page 17) gives a summary of the manufacturing sector's share of export earnings, GDP and employment.

Besides the significant role it played in the growth of Malaysian economy, the manufacturing sector has been the main recipient of commercial bank loans. In 1990, (see Table 2.4, page 24) commercial banks provided 83 per cent of the manufacturing sector's loans. This ratio has been increasing and in 2003 the commercial banks provided 88 per cent of the loans to the manufacturing sector.

As mentioned earlier, data for the first three hypotheses will be collected from the public listed private sector companies, that are involved in the manufacturing activities. The objective is to determine, on an ex-post basis, whether the loans provided by commercial banks were well utilized, in other words, efficiently allocated.

The sample period chosen for the hypotheses varies, depending on the availability of data and constraints faced. For the first three hypotheses, the sample period is from 1982 to 2000. Data required is extracted from the annual reports of the public listed companies selected.
For the fourth hypothesis, data of selected banks are compiled from the annual published accounts for the years 1987 to 1997. While the sample period for the last hypothesis is from first quarter of 1990 to the second quarter of 2003.

With regards to the choice of cutoff point for pre and post liberalization analysis, 1991 is chosen as the cutoff year. As explained in section 2.2, though financial liberalization began in late 1978 with the freeing of interest rates set by commercial banks, the move towards liberalization was not continuous. The liberalization path had been disrupted by periodic adverse economic conditions such as the 1979 oil price shock and the protracted global economic recession in the early 1980s. Liberalization efforts resumed in earnest in 1987 as the economy improved, with full deregulation of interest rates in early 1991. As the freeing of interest rates is the centre piece of financial liberalization, hence 1991 is deemed the appropriate cutoff point for the purpose of pre and post liberalization analysis carried out in this thesis. Thus, the period before 1992 is the pre liberalization period while the years from 1992 onwards is the post liberalization period.

1.6 Limitations of Thesis and Future Research

Time, resource and unavailability of data constrained the scope and to some extent, accuracy of some of the hypotheses of this study. Firstly, the shadow costs estimates are taken from Tan (1994). These estimates may seem less recent than desirable, but they are the most appropriate given the fact that most national parameter estimates for project appraisal are generally not up to date. In a review, Little and Mirrlees (1990), stated that most of the national economic parameters by the World Bank are out of date. The Inter-American Development Bank (IADB), and the Development and Project Planning
Centre, Bradford University have calculated recent sets for a number of countries, whether for their own use or at the country’s request. For Malaysia, there exists two complete sets of national economic parameters, namely those by Veitch (1986) and those by Tan (1994). Comparison of some of the estimates common among these two sets, show that there is little or no change in the shadow cost between these two time periods. This would imply that there could be little change in the shadow costs estimates from 1994 to date. Hence, even though more recent shadow costs estimates were not available, this does not pose a serious drawback towards this study.

This is therefore a potential future research area. If and when the Malaysian government have more recent national parameters for project appraisal, the SCBA methodology used here can be executed using the most recent national parameter estimates. To facilitate this, the Malaysian government could request the help of the World Bank or other institutions such as the IADB to calculate more recent national economic parameters.

Secondly, for the last hypothesis (the banking crisis hypothesis), due to data constraints, logistic regression analysis is conducted based on one episode of banking crisis (the 1997 financial crisis). Malaysia had experienced two episodes of banking crises; the first being the banking crisis of the mid 1980s and the second being the 1997 Asian financial crisis. Variables used for the regression analysis include the GDP variable. As mentioned above, quarterly data are employed for this analysis. However, the earliest quarterly GDP data for Malaysia is from 1990 onwards, hence the mid 1980s’ banking crisis episode had to be left out of this analysis. Though some may hold the view that there cannot be a solid conclusion due to limited data, nevertheless, this represents a first study on banking crisis in Malaysia that employs the logistic regression technique and its results may be taken as only indicative and not totally inappropriate. Such studies are significant because the
causal factors for each individual country that experienced the recent Asian financial crisis are different, even though some similarities exist. Thus, the studies that grouped together all the countries afflicted, may have averaged out the effects of certain factors, while the studies on a country basis on the other hand can zero in on the factors more accurately for each individual country.