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**MOBILISATION OF MUSLIM FINANCIAL RESOURCES FOR
INVESTMENT IN THE MALAYSIAN CAPITAL MARKET
- AN ANALYSIS OF THE BUMIPUTERA INVESTORS.**

by

Sheikh Ghazali Sheikh Abod

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**A thesis submitted in partial fulfilment
of the requirements for the degree of
Doctor of Philosophy**

**Department of Economics
University of Durham
1995**



21 FEB 1996

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ
لِحَمْدِ اللَّهِ رَبِّ الْعَالَمِينَ
وَالصَّلَاةِ وَالسَّلَامِ عَلَى خَاتَمِ الْأَنْبِيَاءِ وَالْمُرْسَلِينَ

*In the Name of Allah,
the-Compassionate, the Merciful,
Praise be to Allah, Lord of the Universe,
and Peace and Prayers be upon
His Final Prophet and Messenger.*

ABSTRACT

Malaysia's economic policies have always emphasised the importance of achieving a balanced socio-economic development within an environment that is economically just and equitable. In this regard, one of its principal agendas has been to increase the Bumiputera's share of capital ownership in the corporate sector as a means of redressing the economic balance among the various ethnic communities. Nevertheless, despite a plethora of measures by the Government designed to encourage the Bumiputera to participate actively in the capital market, the response has not been encouraging. Consequently the Bumiputera Muslims still have the smallest share of capital ownership in the corporate sector, perpetuating the problem of inequitable distribution of wealth.

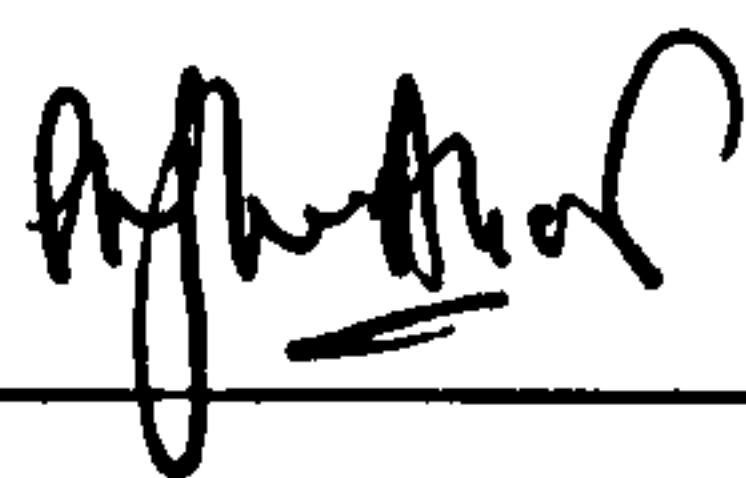
This study is an attempt firstly, to analyse the probable causes to the problem; and secondly, to explore the possibility of redressing the balance of the distribution of share ownership. The work involved both descriptive and explanatory research methods, as well as quantitative theory-testing methodology. Apart from analysing relevant secondary information, the task include examining the characteristics of the Bumiputera Muslim investors from a set of primary data of 575 respondents gathered from a field survey in West Malaysia between June and August 1993. The sampling frame was determined by using the combination of the stratified random technique and the multi-stage area cluster sampling. The method used in data collection was a survey research design, employing a self-administered close-ended questionnaire as the research instrument.

The findings indicated the presence of a series of inter-related factors. These included the community's lack of investible financial resources due to their low household income, which in turn was associated with their nature of employment and level of education. Secondly was the risk-averse attitude and short-termism characteristics among the Bumiputera Muslim investors in the capital market. Thirdly, was their lack of appreciation and knowledge of the working mechanism of the stock market. Finally, was the influence of religious arguments that viewed stock market investment as not permissible in Islam.

To overcome these problems, we suggested the followings : firstly, to educate the Bumiputera Muslim community on the merits of stock market investment and the needs to appreciate and manage the risks involved; secondly, to employ tax incentives policy so as to encourage greater savings and promote long-term investment strategy among the community; thirdly, to offer and promote Islamic investment instruments (such as the Islamic unit and investment trusts) which may offer competitive returns and bring about a positive and meaningful response from a large section of the Muslim community; and finally, to elucidate the Muslims on the permissibility of stock market investment from the *Shari'ah* perspective.

DECLARATION

I hereby declare that this thesis results entirely from my own efforts and confirm that no part of the material offered has previously been submitted by me for a degree in this or in any other University.

Signed :  _____

Date : 31st Oct. 1995

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CHAPTER 1

INTRODUCTION

1.1 Preamble

An efficient capital market operating within a well-structured and developed financial system is indispensable for a developing and expanding economy like Malaysia. It serves as the hub of the overall economic system by facilitating the transfer of financial resources from the surplus units to the deficit units. The stock market as an entity of the financial system provides a forum for the conduct of financial intermediation between the two parties. In this way it plays a crucial role in enabling an effective mobilisation and efficient allocation of savings which eventually contributes to the overall socio-economic development of the country.

Malaysia is perhaps the fastest growing country in the Muslim world, sustaining high growth with price stability for many years. Its economy is characterised by private sector led growth with a well-functioning capital market. However, despite its impressive economic achievement, it remains quite perplexing for many to understand the inability of the large Muslim population in the country to capitalise on the substantial opportunities available, which if properly tapped, could have improved their economic and financial positions vis-à-vis the non-Muslim community. The Muslims constitute the majority of the poor households, having the lowest average household income, with the smallest employment representation in the industrial and financial sectors, and having the smallest percentage of share capital ownership in the corporate sector.



Why do these problems occur and persist ? What are the underlying reasons that have caused the problems to be perpetuated ? Have the policy-makers been insensitive towards the plight of the Muslims in the country, or have the Muslims not been responsive enough to the poverty eradication and industrialisation programmes of the Government ? Has religion and culture played any role in influencing the attitudes of the Muslims in conducting economic activities, or has the financial environment (especially in the capital market) not been attractive enough for them to respond ? These are some of the issues that have prompted this research.

Prior to identifying the specific problems and outlining the main objectives of the study, a brief account of Malaysia' socio-economic development can shed further light on the underlying issues.

1.2 Background to the Study

Malaysia is a relatively small South-East Asian country with an estimated population of 19.5 million in 1994. Its plural and multi-religious society is comprised of three main ethnic groups, made up of 62% Malays and other indigenous people (collectively known as the *Bumiputera*), 29% Chinese, and 9% Indians and others. Bumiputera literally means son-of-the-soil. The country's constitution accorded them special privileges in order to reduce the economic imbalance in the nation's wealth distribution since gaining independent in 1957. All Bumiputera Malays are constitutionally by definition Muslims (hereafter referred as the *Bumiputera Muslims*), and together they formed about 50% (or 9.7 million) of the population. However, not all Bumiputeras are necessarily Muslims for there is a small percentage of Bumiputera non-Muslims living in the Borneo island of East Malaysia¹. Likewise, there is also a minor

¹Since the proportion of Bumiputera non-Muslims is relatively small (about 10%), unless otherwise specified, most of the term *Bumiputera* in the text, is used interchangeably to refer to the *Bumiputera Muslims/Malays* (largely found in West Malaysia).

proportion of other Muslims scattered in many large towns of Peninsular West Malaysia. In total, the Muslims constitute about 53% of the population while the remaining are either Buddhists, Christians, Hindus or others.

In terms of population distribution, about 82% of the population live in the more developed West Malaysia while the remaining 18% are sparsely distributed in East Malaysia. The populace is relatively young with over 36% below 15 years of age, while about 60% is within the working age group of 15 - 64 years. A large percentage of the Bumiputera Muslims are located in the rural hinterlands of the urban and other growth centres. The Indians are generally found in the rubber plantations and the Chinese are mostly located in the large towns and urban centres, including the main ports and industrial areas of the country. As expected, such a rural-urban domicile distribution among the ethnic groups has a profound influence in creating an environment of adverse racial economic disparities. Deep rooted demarcations not only permeated the society in economic activities, but also in political organisations, religious beliefs, and cultural and educational developments.

In such a set up, Malaysia has in the early years maintained a dualistic economic structure. The economic dualism appeared in the form of two distinct methods of production; one was the large scale production method using modern technologies, located in the Chinese-populated commercial urban centres, while the other was the traditional methods of peasant agriculture, practised by the rural Bumiputera Muslims. Despite the economic imbalance among the races, the good record of ethnic relations was maintained because the Bumiputera's political sovereignty was generally honoured. However in the process, when their political and economic status deteriorated in step with the ascendancy of the Chinese economic power, the Bumiputeras decided to call for a new arrangement in order to alleviate the potential problems of racial polarisation. In fact, there was also a consensus among the leaders of all ethnic communities of the

need to accelerate the Bumiputera's socio-economic progress in competition with the more aggressive non-Bumiputeras.

In order to develop the economy, the Government then embarked on successive five-year development plans (called the *Malaysia Plan*) beginning in 1966², based on the system of free enterprise, and with foreign investments. The intention was to create prosperity for all Malaysians, while simultaneously accelerating the Bumiputera's economic development³. The period of *laissez-faire* economic policies between 1957 and 1969 saw (almost) a complete absence of state-interference in major business operations which were largely controlled by the Chinese and foreign investors. The Government's interventions only appeared in programs that promote rural development and the provision of social and physical infrastructure. The focus of the development strategy then, was to reduce the economy's over-dependence on commodities like rubber and tin so as to strengthen the economic base and promote economic stability⁴. Although the development model was relatively successful in generating national income and diversifying the economy, it also contributed to further ethnic economic disparities, and hence further polarisation in the society.

The Bumiputera Muslims did not see any benefit in this economic arrangement and soon felt they were being economically marginalised, and politically weakened within their own society. These feelings of exclusion contributed to the breakdown of political order and in May 1969, twelve years after achieving independence, the socio-political equilibrium was violently upset, resulting in a bloody and vicious communal riot.

²The First Malaysia Plan was between 1966-1970. By the end of this year, the country will be closing its chapter on the Sixth Malaysia Plan (1990-1995). See Table 2.1 in the following chapter.

³See Faaland, et. al. (1990 : pp. 11-12).

⁴See Meyanathan (1993 : pp. 6-8).

The post-1969 era saw a complete shift of the state's role in the economy. Under the new leadership of a younger group of Bumiputera Muslims, the state played a highly interventionist role in a much more pro-Bumiputera direction, aimed at increasing Bumiputera control of the economy while strengthening their own political base. This led to the introduction of the *New Economic Policy* or the NEP (1971-1990) at the beginning of 1971 with the overriding objectives of attaining national unity and fostering nation-building through a two-prong strategy of, firstly eradicating poverty, and secondly, restructuring the Malaysian society to eliminate the identification of race with economic function. Incidence of poverty in 1970 was almost 50%. The Bumiputera formed the majority of the poor with a poverty rate of 65%, the Indians at 39% and the Chinese at 26%. Targets were then set so that by the end of 1990, the Bumiputera's corporate ownership would be 30%, the non-Bumiputeras 40%, and the foreigners the remaining 30%; these targets were in stark contrast to the breakdown of 2.4%, 34.3% and 63.3% respectively, in 1970⁵.

Nevertheless today, after almost twenty-five years since the implementation of the NEP in 1971, despite a plethora of measures designed to enhance the economic position of the Bumiputeras, it is still a matter of contention even among the community themselves, whether the NEP has been successful in restructuring the Malaysian society and achieving the specific goals of increasing the Bumiputera share of the economy. Although the situation has improved considerably, the targets of the NEP are yet to materialise. For example, by the end of 1992, the non-Bumiputeras still maintained their dominance in the corporate sector, owning about 40% of the total corporate equity as compared to a mere 18% by the Bumiputeras⁶. To compound the problem further, there has also emerged an intra-community economic imbalance within the Bumiputeras themselves⁷. Empirical evidence has shown that wealth among the community seems to

⁵Source : The Second Outline Perspective Plan 1991-2000.

⁶Source : Mid-term Review of the Sixth Malaysia Plan 1991-1995, p. 67.

⁷See Chapter 8 for analysis of the field-study which reaffirms this situation.

have been concentrating among a small group of elite Bumiputeras who have considerable political influence in the Government. They have taken advantage of their privileged status, access to information and power over decision-making processes, and hence have been able to maintain their status-quo⁸.

Meanwhile, more than 60% of the Bumiputera Muslims still remain in the rural areas with a large percentage engaged in the least productive sector of the economy such as smallholding agricultural activities, domestic business and cottage industries. The incidence of poverty is persistently more profound among the Bumiputeras and the Indians. While the latter minority dominates employment in the plantation sector, the more enterprising and wealthy Chinese are largely found in all urban districts and large cities of the country, controlling the commercial and business sectors. Although the poverty rate reduced considerably from about 50% in 1970 to 13.5% at the end of 1993, the income gap between the rural and urban districts was still significantly large, with a poverty incidence of 18.6% and 5.3%, respectively.

Upon the expiration of the NEP in 1990, another long-term policy called the *National Development Policy* or the NDP (1991-2000) was introduced. The latter builds upon the achievements and experiences of the NEP, offering a broader framework to achieve the country's socio-economic objectives of balanced growth and an equitable distribution of wealth⁹. The policy puts more emphasis on growth and market forces as means of achieving economic equilibrium among the races. However, recent figures showed that since the advent of the NDP, the Bumiputera's share in the corporate sector has declined instead of increasing. Such abstruse issues motivate and support the relevance and necessity for this study.

⁸See Mehmet (1986).

⁹More detailed discussions of these policies (the NEP and NDP), in relation to corporate equity distribution and ownership, will be dealt with in Chapter 5.

1.3 Statement of the Problem

Today, Malaysia is one of Asia's fastest growing economies, registering an average annual growth rate of more than 8.7% for the past seven consecutive years. The economy has been forecasted to maintain its real growth at more than 8.5% in 1995 with an estimated per capita GNP of about RM9,649 (£2,412)¹⁰. The financial system and the capital market have also developed considerably, in tandem with the growth in the economy. The Kuala Lumpur Stock Exchange has expanded from an insignificant component of the financial system into the largest bourse in South-East Asia with market capitalisation exceeding RM500 billion (£127.3 billion) at the end of 1994.

Nevertheless, despite such significant developments in the economy and the capital market, it is perplexing to learn that the Bumiputeras have yet to achieve the NEP's target of acquiring 30% of total equity in the corporate sector. As we shall describe later on, the Government has indeed introduced a plethora of policies and reforms, including the granting of direct assistance, training, education and incentives for the community, in order to encourage them to participate actively, both in the stock market and in the small and medium-sized business sectors. However, the response has not been encouraging. There is still an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and consequently the problem of an inequitable distribution of share capital ownership among the various ethnic communities persists.

This underlies the motivation for the research. There is a need, firstly to analyse the underlying reasons for the lack of interest and response from the community in capital market investment, and secondly, to explore the means and possibility of redressing the balance of equity ownership in the country. Several researches have been

¹⁰Source : Economic Report 1994/95, Ministry of Finance, Malaysia. RM is the Malaysian currency denoting Ringgit Malaysia and its exchange rate at the time of writing is approximately RM4.00 to £1.00 sterling and RM2.60 to US\$1.00.

conducted to identify these issues, but we felt there has yet to be a comprehensive study that examines the extent to which *religious conscience and convictions* influenced the attitude of these potential Bumiputera Muslim investors. Hence the raison d'être for the research.

The long term goal of Malaysia is to achieve the status of a developed country with full industrialisation by the year 2020 - a plan called *Vision 2020*. It is essentially a long-term vision containing broad policy directions for Malaysia to attain, some twenty-five years from now, the status of a *self-defined fully-developed country*, along an all-encompassing dimension which include economics, social, political, spiritual, cultural, and psychological. However, the anxiety among many of the policy-makers remains as to "what will the economic and financial positions of the Bumiputera Muslims be by the end of that year ?". Amidst an increasing Islamic awareness among the new affluent and educated Bumiputera Muslims, there was also a growing concern in the Government that the community might even opt out of the economic activity, especially in the capital market, on religious grounds. This would certainly jeopardise its long term goals of developing the Bumiputeras into an equally competent ethnic group as the non-Bumiputeras, in technological advancements as well as economic achievements.

Recognising that Islam itself could prove to be a driving force to spur the Bumiputera Muslims to get more involved in economic activities, the Government started to respond by introducing an interest-free banking scheme, Islamic money-market, and several Islamic financial instruments, operating side-by-side with the conventional banking system. The future plan is to develop an Islamic capital market, as a prequel to the establishment of an Islamic financial system. Since this alternative system could presumably be more appealing to the large Muslim population in the country, the Government was optimistic that it would enable them to enhance mobilisation of the Bumiputera Muslims financial resources for investment purposes in the capital market. At the same time, it would also encourage the community to increase

their participation of equity ownership, which eventually would contribute to the achievement of the Government's long term economic goals.

However, some observers felt the emphasis should be focused on developing a broader spectrum of Islamic financial instruments within the banking system, rather than on establishing an Islamic capital market, which they claimed may not be distinctly different from its conventional counterpart. Other traditional Muslim scholars went further by even dismissing the idea of encouraging Bumiputera Muslims to participate in the stock market, which they felt was similar to gambling in a casino, and hence, Islamically forbidden. These are important issues that need to be addressed from the *Shari'ah* viewpoints in order to dispel any misconception which might be detrimental to the future economic position of the Bumiputera Muslims.

Indeed over time, the task of the Government to achieve its economic targets became more challenging. Although theoretically it is feasible to establish an Islamic capital market in Malaysia, its economic viability would be very much dependent upon its ability to attract a significant and meaningful response from both the Muslim individual investors and, more importantly, the private sector. In this regard, the recent experiences of the Islamic banking system in the country led us to wonder whether Islamic consciousness was indeed the over-riding factor causing the frugality of Bumiputera Muslim investment in the stock market. For instance, while there appears to be reservation and deep concern among many Muslims with respect to the *Shari'ah-forbidden* interest-based financial system, surprisingly the response towards the interest-free banking scheme was found to be relatively small.

It seems that the Muslims were reluctant to adopt the *Shari'ah* means, especially when they found the latter to be materially less advantageous than the existing conventional financial system. Our initial assumption was that, the influential factors must have extended beyond religious convictions of merely avoiding "gambling" in the

stock market, or refusing the forbidden *interest*. Thus, we need to analyse and provide empirical evidence to determine what these factors are. There are reasons to believe that they include several complementary elements such as risk-return attitude, investment preferences, savings behaviour, and disposable income of the Bumiputera Muslims. In short, it is important for us to understand the perceptions of the Bumiputera Muslim investors, to appreciate their different shades of needs, the importance they place on returns to investment, and to identify the financial products and services that could be more appealing to them, without necessarily transgressing the *Shari'ah's* limits of permissibility.

1.4 Objectives of the Study

Based on the problems defined above, the main objectives of the study are as follows.

1. To examine the financial position of the Bumiputera Muslims in Malaysia in relation to the growth and development of the country's economy and its financial system over the last few decades. It seeks to analyse the state of financial affairs of the community, and to appraise the potential and prospect of enhancing their involvement in the capital market in order to redress the economic balance and equitable distribution of share capital ownership among the various ethnic groups in the country.

2. To examine the Bumiputera Muslims' attitudes toward savings and investment in the capital market, as well as their preferences in investment alternatives and approach towards risk. It attempts to identify the probable causes, problems and issues that have impeded the community's ability to achieve and sustain a sizeable proportion of equity ownership relative to the other communities.

3. To explore some possible alternatives which might enhance the mobilisation and efficient allocation of the Bumiputera Muslims' financial resources for investment in the Malaysian capital market. It seeks to evaluate the feasibility and economic viability of introducing Islamic investment instruments as a means of increasing the community's equity ownership in the corporate sector.

4. To examine some competing *Shari'ah* views of Muslim scholars and jurists on the limits and permissibility for the Muslims to participate in stock market investment. It aims to evaluate these arguments in the light of the social and economic environment of Malaysia, and attempts to offer some prescriptions and encouragement for the Bumiputera Muslims to increase their investment participation in the capital market, in accordance with the Islamic principles.

1.5 Chapter Outlines

The study is broadly divided into two parts. The first part is an analysis based on secondary information, facts and figures obtained from several official Government publications and bulletins, corporate and market reports, prior research, and published literature on the subject matter under review. The second part draws information and inferences from a host of statistical analyses conducted on a set of primary data gathered from an extensive field survey of Bumiputera Muslim investors throughout West Malaysia. Accordingly, the chapters have been organised to reflect this framework, with each part comprising five chapters; the first part from Chapters Two to Six, and the second part covering the remaining Chapters Seven to Eleven (the last chapter being a summary and conclusion of the study).

1.5.1 Part One

In examining the financial position of the Bumiputera Muslims in Malaysia, it is important to provide a clear frame of reference that will enable us to develop our analysis at later stages. *Chapter Two* provides a brief perspective of the Malaysian economy, examining its experiences of growth, development and structural changes which have taken place since the country's independence in 1957. It serves an important background and lays an initial foundation for more detail discussion of specific issues in subsequent chapters. It is important to appreciate the economic structural transformation especially in the light of the Government's privatisation policy which (among others), not only attempts to promote a private-sector led growth, but more importantly, offers yet another opportunity for the Bumiputera Muslims to increase and catch up with the non-Bumiputeras in the corporate sector participation. The success of this arrangement in achieving its goal remains to be seen.

In complementing the discussion of the Malaysian economy, *Chapter Three* examines some diverse experiences of growth, development and financial reform in the Malaysian financial system. It provides a broad overview of the system, focusing on its structural transformation and several monetary policy changes that have brought about considerable financial liberalisation, financial deepening and innovations within the wide spectrum of institutions the system covers. Empirical evidence was provided to illustrate the process of financial deepening and its stages of development, especially in the rapid growth of assets and institutional structure. The aim of examining these experiences is to enable us to relate and analyse the extent to which the Bumiputera Muslim community has been able to capitalise on the economic opportunities created through such developments. The facts and figures in this chapter form a basis for us to appraise the potential and prospect of increasing the Bumiputera Muslims participation in the capital market. In addition, special emphasis is also given to the development of

the Islamic banking system, especially the introduction of the *interest-free banking scheme*, operating within the *Islamic windows* of conventional commercial banks.

The following two chapters build the picture further, shedding light on several inter-related and pertinent issues confronting the Bumiputera Muslims in their effort to enhance the community's corporate equity ownership. *Chapter Four* examines the capital market development in Malaysia focusing on the Kuala Lumpur Stock Exchange (KLSE). It analyses the development of the three main segments of the capital market, namely the Government securities market, the corporate bond market, and the equity market. As we shall see, based on the funds mobilised through the financial system relative to the needs of the private sector, there was considerable scope for the Bumiputera Muslims to enhance their financial position and equity ownership. In addition, the chapter also describes and analyse the nature and characteristics of the equity market of the KLSE. An understanding of the Exchange's broad operation (such as its trading mechanism, listing requirements, disclosure rules, characteristics of companies and other regulations), would support our future discussion on the legitimacy of share trading from the Islamic perspective.

Chapter Five conducts an analysis of the Bumiputera equity participation in the Malaysian corporate sector, focusing on the encouragement of the community to mobilise their savings through institutions such as the unit trust funds for investment purposes. It examines the distribution of shareholders by portfolio size, market value, nationality, ethnic groups and other characteristics. The chapter also explores the development of the unit trust industry, especially the Bumiputera Unit Trust and the National Unit Trust, both of which were established exclusively for the Bumiputera community to enhance their equity participation in the capital market. It then highlights some of the critical issues that were thought to have a significant influence in bringing about the prevailing phenomena.

Chapter Six addresses the issues of competing *Shari'ah* views on the legitimacy of some aspects of stock market investment. Apart from justifying the economic functions and necessity of the stock market in a modern economy, the chapter discusses the various opinions of some Muslim scholars and jurists on the limits and permissibility for the Muslims to participate in the stock market. It aims to shed light and offer some prescriptions and guidelines, as well as conclusive evidence in support of equity investment by the Bumiputera Muslims on the Kuala Lumpur Stock Exchange.

1.5.2 Part Two

While most of the chapters in Part One of the thesis attempts to analyse the financial position of the Bumiputera Muslims in Malaysia (employing available secondary information), the chapters in Part Two generally express the results and conclusions drawn from a host of statistical analyses conducted on a set of primary data gathered from a field survey.

Chapter Seven describes the research methodology employed, and the design of the field survey (entitled *Muslim Savings and Investment in the Financial Market of Malaysia*), that was conducted between June and August 1993. The survey covered most of the large towns and cities of West Malaysia with an initial sample size of 600 Bumiputera Muslim respondents from the middle and upper income brackets, using a closed-ended questionnaire as its survey instrument. The sampling technique employed was a mixture of the stratified random sampling and multistage area cluster sampling. This chapter also describes the research objectives, hypotheses and conceptual model that was constructed to test the hypotheses.

Our initial theory was that, there were many plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the

Malaysian capital market including issues such as their low household disposable income, risk averse attitudes, short-term investment characters, different investment preferences, lack of knowledge of the capital market, attitudes towards risk-return complexion, and Islamic religious convictions. In determining the validity of each of these factors, we constructed a testable empirical model, which was then used for the statistical analyses in the next three chapters.

Chapter Eight describes the univariate analysis of the sample. As is often the case, a descriptive analysis involves the reporting of results of the survey by examining data and describing how respondents vary in their responses to each of the seventy-one questions posed in the questionnaire. In the course of doing so, we shall identify some perceptions and behavioural patterns of the Bumiputera Muslim investors in Malaysia.

Having examined the distribution of values for particular variables through the use of frequency tables and associated statistics in the previous chapter, *Chapter Nine* conducts a bivariate analysis which explores the differences and relationships among the many variables. Apart from drawing some conclusions about the population (on the basis of what has been observed) it also clarifies the underlying reasons for an association, the strength and the direction of the association, as well as the significance of the relationship. The statistical analyses measure the presence of any socio-domicile influences and shared values of the Bumiputera Muslim investors in the capital market.

In the previous two chapters, the analyses were deliberately kept simple in order to establish a strong foundation for more advanced examination. In the last chapter of the analysis, *Chapter Ten*, we progress to more difficult tasks by conducting exploratory factor analysis and hierarchical loglinear analysis which allow the examination of multiple variables simultaneously. It aims to explore the possibility of drawing further information from the survey sample by employing these two techniques which could either complement or reaffirm our earlier findings. Generally, in cases involving

multiple variables, it is best to use some stringent statistical tools such as the parametric multi-variate linear regression method. However, in our situation, the level of measurement of the variables involved (nominal and ordinal) did not permit us to employ such tools, hence the alternative choice of loglinear and factor analyses.

Finally, *Chapter Eleven* summarises and concludes the study.

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CHAPTER 2

AN APPRAISAL OF THE MALAYSIAN ECONOMY

2.1 Introduction

Malaysia is currently one of Asia's fastest growing economies, registering an average annual growth rate of more than 8.7% for the past seven consecutive years. Over the same period, Malaysia has moved up from fifth position in 1991 to third in 1994 among the Asian countries, on the World Competitiveness Scoreboard¹ after Singapore and Hong Kong, surpassing the Asian *economic tigers* of Taiwan and South Korea. In terms of trade, it is the world's nineteenth biggest trading nation with more than one percent share of the world trade in 1992². The country's per capita income in 1994 at current market prices was about RM8,856 (£2,214)³ which ranked third in the South-East Asian region, after Singapore and Brunei. The economy has been forecasted to maintain its real growth at more than 8.5% in 1995 with an estimated per capita GNP of about RM9,649 (£2,412)⁴ placing it among the upper middle-income economies of the developing countries⁵.

¹ Competitiveness : World Standing 1994 :-

1. United States 2. *Singapore* 3. Japan 4. *Hong Kong* 5. Germany 6. Switzerland 7. Denmark
8. Netherlands 9. New Zealand 10. Sweden 11. Norway 12. Austria 13. France 14. U. Kingdom
15. Australia 16. Canada 17. *Malaysia* 18. Taiwan.... 24. Korea..... 32. Italy.....

(Source : World Competitiveness Report, International Institute for Management Development, 1994).

² See Table 2.7 below.

³ At an exchange rate of RM2.60 to US\$1.00, that was equivalent to US\$3,406.

⁴ Source : Economic Report 1994/95, Ministry of Finance, Malaysia. Note : Unless otherwise mentioned, all figures and relevant facts appearing in this chapter have been obtained and adapted from official Government's publications such as the Economic Reports of the Ministry of Finance, Malaysia; Annual Reports of Bank Negara Malaysia and various reports of Malaysian Institute of Economic Research.

⁵ The World Bank (1993) in its study on the East Asian economies has defined the income-based economy groupings as follows : *low-income*, *lower-middle-income*, *upper-middle-income* and *high-income economies* are those with a per capita GNP of US\$635 or less, between US\$635 and US\$2,555, between

With such an achievement, the country seems to have made an impact on the international economic scene and has made a deep impression on entrepreneurs and foreign investors alike. Much of Malaysia's economic dynamism and growth performance has been due to its ability to expand and diversify its export-producing capacity. As an open economy, Malaysia's economic success is even more remarkable because it was achieved with low inflation and relative price stability amidst protracted and sluggish recovery in major world economies.

Meanwhile, the country's financial system and the capital market, in particular the Kuala Lumpur Stock Exchange (KLSE), have also developed significantly and undergone major transformation in preparation for the challenges of the future. In terms of market capitalisation, the KLSE has grown from RM131.7 billion (£32.9 billion) in 1990 to RM509 billion (£127.3 billion) at the end of 1994, almost three times the size of the country's GNP. In terms of size, this has placed the exchange to be the largest in the South-East Asia and sixth largest in Asia⁶. Due to its high return on equity⁷, the exchange is also one of the most favoured emerging equity markets among the international institutional investors.

The long term goal of Malaysia is to achieve the status of a developed country with full industrialisation by the year 2020 - a plan called *Vision 2020* by the ruling Government. To meet that target, Malaysia's economy needs to grow by at least 7% in each of the next 26 years. At the rate the economy is growing and with the economic outlook in the industrialised countries improving, the target seems attainable. However, despite its impressive growth and development, amidst a stable political environment

US\$2,555 and US\$7,911, and more than US\$7,911 as at 1991 respectively. Malaysia's per capita GNP was US\$3,711.

⁶The stock-exchange is sixth largest after Tokyo, Osaka, Hong Kong, Taiwan and South Korea. Singapore's stock-exchange is only capitalised at about £88 billion or US\$135 billion as at January, 1995. (See Asiaweek, January 20, 1995).

⁷Malaysia had a return of 122.8% in dollar terms in 1993, next to Hong Kong which recorded 127.9%.

and prudent management decision-making, some of the major objectives of the Government's economic policies over the past twenty-five years have yet to materialised. A clear example is in the issue of redistribution of corporate equity ownership among the various ethnic groups of the country. It is thus imperative to understand the underlying factors that led to this failure as well as to identify the probable means that could alleviate, if not overcome the seemingly intractable problems. These were among the major factors that have motivated the study.

In analysing such a critical issue, we need to set a clear frame of reference for more specific discussion in later chapters, especially on the development of the capital market, distribution of equity ownership, and characteristics of investor's participation on the Kuala Lumpur Stock Exchange (KLSE). This chapter attempts to provide a brief perspective of the Malaysian economy, examining its experiences of growth, development and structural changes which have taken place since the country's independence in 1957. The following three chapters will then build up the picture, shedding further light on several inter-related and pertinent issues confronting the Bumiputera Muslims in their effort to enhance the community's corporate sector ownership.

This chapter comprises five sections. Section two describes in brief the concept of growth and development as defined in Malaysia, which emphasised an all-encompassing dimensions, as part of its structural transformation programme. The next section provides an overview of the economy, exploring the progress and achievements made over the past three and a half decades. We shall briefly examine the various stages of structural changes that reformed the economy from a primarily agricultural subsistence-oriented base to a modern export-oriented and diversified industrial-based. It is important to appreciate the economic structural transformation especially in the light of the Government's privatisation policy which (among others), not only attempts to promote a private-sector led growth, but more importantly, offers yet another

opportunity for the Bumiputera Muslims to increase and catch up with the non-Bumiputeras in the corporate sector participation. This was usually achieved through some forms of special concessions and allocations of privatised projects for the community. The success of this arrangement in achieving its goal will be described in subsequent chapters. Meanwhile, section four examines the underlying factors behind Malaysia's economic success and the challenges facing both the economy and the Bumiputera Muslims, in the years to come. Finally, section five summarises the chapter.

2.2 The Malaysian Concept of Growth and Development

In general, economic growth may be defined as the steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national income. Traditionally, the capacity of the national economy to generate and sustain such economic growth has been referred to as *development*, and the rate of growth of per capita GNP has been used as its index of measurement. However, today, growth and development is seen as more encompassing than a purely economic phenomenon; it is a multidimensional process involving the reorganisation and reorientation of the entire economic and social systems. Indeed, during the 1970s, *economic development* has been redefined in terms of the reduction or elimination of poverty, inequality and unemployment within the context of a growing economy. In a developing country like Malaysia, success in economic development is seen as the attainment of a high level of economic growth with price stability and equity, concurrent with rising living standards throughout society, sustained over a fairly long period of time.

The literature on economic development over the past forty-five years has been dominated by four major and sometimes competing strands of thought. In the 1950s and early 1960s, the main focus was on the concept of the *linear stages of growth*; the most

prominent being the Rostow's "*five-stages of growth*" and the Harrod-Domar growth model. (In the context of Rostow's model, it may be suggested that the Malaysian economy is at its very early "*take-off stage*")⁸. However, this concept received wide criticisms and was claimed to be imprecisely defined and difficult to be tested scientifically⁹. In the 1970s, the concept was replaced to a great extent by two competing economic schools of thought, namely, *the theories and patterns of structural change* and *the international dependence revolution*. While the latter is more radical and political in orientation, the former uses modern economic theory and statistical analysis in an attempt to portray the internal process of structural change¹⁰.

In the Malaysian experience, the structural change refers to the mechanism by which underdeveloped economies transform their domestic economic structures from a heavy emphasis on traditional subsistence agriculture to a more modern, urbanised and industrially diverse manufacturing and service economy.

Finally, in the 1980s, the concept of *neo-classical counter-revolution* in economic thought took place - one that emphasised the beneficial role of free market and the heavy costs of government intervention in promoting development. This concept which took the form of supply side macroeconomics and the privatisation of public corporations has also influenced the Malaysian authorities towards the end of the 1980s, leading to the policy of downsizing the role of the Government in the market and promoting the private sector as the main engine of growth.

⁸ For details of the model, see Rostow (1960). Basically, he divides the economic growth process into five stages, namely, *the traditional society*, *the pre-conditions for take-off*, *the take-off stage* characterised by steady sustained growth, *the drive to maturity* which is a long period of continued progress and finally *the stage of high mass consumption* characterised by an affluent population and by mass production of sophisticated consumer goods and services such as in the United States and Britain.

⁹ See Drummond (1961) and Caincross (1961).

¹⁰ See Todaro (1989 : Chapter 3).

Nevertheless, the Government's concept of growth and development within the broad outline of *Vision 2020*, seems rather different from the traditional definition. Apart from emphasising the importance of growth with price stability and equity, it has also stressed the need for the society to be developed and infused with moral, spiritual, ethical and cultural values. Thus the agenda includes an all-encompassing dimensions to form a society that is democratic and caring, liberal and tolerant, economically just and equitable, progressive and prosperous, and in full possession of an economy that is competitive, dynamic, robust and resilient¹¹. In addition, it has been recognised that sustained growth generally results from a stable interplay of social, economic and political forces. Hence, in multi-ethnic Malaysia, socio-economic stability manifested through an equitable distribution of the nation's wealth has been considered the hallmark in ensuring the continuity of success.

Prior to the new vision, the economic development in Malaysia may essentially be divided into three main phases¹², namely, the laissez-faire/market-led phase between 1957 and 1970, followed by the state-led development phase between 1971 and 1985, and finally the current phase of adjustment and liberalisation which began in 1986. We shall examine each of these phases after providing an overview of the economy.

2.3 An Overview of the Malaysian Economy

The economic system of Malaysia is essentially based on private enterprise with the Government playing an active role in development planning to promote balanced economic growth and social progress. Malaysia is well-endowed with natural resources, favourable climatic conditions, a young and dynamic population as well as an efficient government machinery. The utilisation and development of the nation's natural, mineral

¹¹ Source : Malaysia - The Way Forward (1991), Malaysian Business Council, Kuala Lumpur.

¹² See Meyanathan (1993).

and human resources, aided by prudent fiscal and monetary management in an environment of political stability, has made Malaysia one of the relatively more progressive, prosperous and fastest growing economies in Asia¹³. The country has prospered through the combination of foreign capital inflow, public sector development policies and private sector initiatives. There has always been consistency and continuity in the Government policies with emphasis on basic social infrastructure development, alleviation of poverty and equitable distribution of wealth in society. The engine of economic growth has been the wholesale expansion of an export oriented manufacturing sector, made possible by its success in attracting large amounts of foreign investment while tapping the cost-competitive labour force.

At the time of gaining independence from the British in 1957, the Malaysian economy was very much dependent on commodities such as rubber and tin for about 80% of its total export earnings. However, the situation has since changed. During the past 37 years, the economy has undergone profound structural changes, evolving from a primary commodity producer into an increasingly diversified and broad-based economy with an expanding industrial and manufacturing base. At the end of 1994, the nation dependence on these two commodities had shrunk to less than 2% of the total exports while the manufacturing sector had increased steadily, surpassing the importance of the agricultural sector. The latest economic report showed that manufactured goods has accounted for about 32% of the GDP and more than 75% of its total export earnings, with electronics and electrical goods leading the export volume¹⁴. Overall, output in the manufacturing sector expanded 13.6% in 1994 while the value of manufacturing exports grew by 28% to RM114.8 billion (£28.7 billion).

¹³ Money and Banking in Malaysia, Bank Negara Malaysia (1994).

¹⁴ See Economic Report 1994/95, Ministry of Finance, Malaysia.

As seen in table 2.1 below, Malaysia has consistently enjoyed a high rate of economic growth since 1966. Growth in the gross domestic product at constant prices (real GDP) has steadily accelerated from an average annual rate of 5.4% during the First Malaysia Plan (1966-1970) to an estimated 8.4% by the end of the Sixth Malaysia Plan in 1995. The dip in 1985 when real GDP declined to -1.1% was largely due to the prolonged world recession as well as some structural problems faced within the domestic economy. However, with some adjustments undertaken by the authorities to address the problems, the situation improved and the economy recovered to register an average annual growth rate of more than 8.7% for seven consecutive years, beginning 1988 and 1994 inclusive. (However, as we shall see later in section 2.4, such economic success has also brought along many of its problems that have yet to be resolved).

Table 2.1
Malaysia : Annual Percentage Growth Rate of Gross Domestic Product
(at constant prices)

Malaysia : 5-year Plans						
Period/ Years	1st 1966-70 (^{'65=100})¹	2nd 1971-75 (^{'70=100})	3rd 1976-80 (^{'70=100})	4th 1981-85 (^{'78=100})	5th 1986-90 (^{'78=100})	6th 1991-95 (^{'78=100})
1	6.2	10.0	11.6	6.9	1.2	8.7
2	1.0	9.4	7.8	6.0	5.4	7.8
3	4.2	11.7	6.7	6.2	8.9	8.3
4	10.4	8.3	9.3	7.8	9.2	8.7
5	5.0	0.8	7.4	-1.1	9.7	8.5 ²
Average	5.4	8.0	8.6	5.2	6.9	8.4³

Notes : ¹Figures in parenthesis refer to the respective base years used in computing the growth rates.

²Forecast.

³Estimate.

Sources : Money and Banking in Malaysia, (1994); Economic Reports, Ministry of Finance, Malaysia (various issues); Bank Negara Malaysia, Annual Reports (various issues)

What were the underlying factors that led to the achievements? Perhaps the answer is best understood by looking at the various stages of transformation the economy has experienced as well as the factors that motivated the shifts from an agro-based to a manufacturing-based economy.

2.3.1 The Motivation to Diversify

In the early 1960s, when the export earnings was still largely dependent on commodities like rubber and tin, the Government then, realised the need to diversify the economy, away from being overly dependent on these two commodities whose prices were extremely sensitive to external fluctuations. Besides, there was also the consideration to generate employment opportunities and boost future economic growth. Since then, greater emphasis had been placed on diversification of the agricultural sector into other plantation crops while at the same time promoting the growth of the manufacturing industry. Consequently, following the implementation of deliberate policy measures aimed at export diversification, the economy turned to become more resilient and broad-based with a well-diversified production structure and a wide range of exports including palm oil, timber, cocoa, crude oil and increasingly manufactures. By early 1970s, Malaysia was known to be the most efficient producer of rubber, palm oil and cocoa in the world, which later became the major export earnings commodities.

Nevertheless, like the experiences of many developing countries, the economy's heavy dependence on agricultural exports made it vulnerable to external developments and open to the vicissitudes of foreign trade. The move towards further diversification and enhancing the manufacturing sector then received serious consideration and continued into the 1970s. Overall, apart from some cyclical swings, the decade of 1960s saw the economy attaining an average annual growth rate (real GDP) of 5.2%.

2.3.2 The First Outline Perspective Plan

This period between 1971 and 1980 not only marked the initial momentum in the country's economic growth, but more importantly, saw the formulation of several major economic policies that spanned for more than twenty years. The First Outline

Perspective Plan (OPP1) was introduced to cover the period 1971-1990. Under it, the Government implemented four development plans from the Second Malaysia Plan (1971-1975) to the Fifth Malaysia Plan (1986-1990). These development plans were implemented within the framework of the New Economic Policy (NEP). The latter which was introduced in 1971 (following a racial riot in 1969), aimed at promoting growth with equity, eradicating poverty irrespective of race, restructuring society, and reducing the ethnic economic imbalance, all with the objective of fostering national unity within the plural society.

As mentioned in the previous chapter, the incidence of poverty in West Malaysia in 1970 stood at 49.3% of all households. The target was to reduce this to 16.7% in 1990. In terms of ethnic groups, the Bumiputera formed the majority of the poor with the highest incidence rate of 65%, compared with 39% for the Indians, and 26% for the Chinese. The second prong of the NEP strategy sought to restructure society by eliminating the identification of race with economic function. This objective was to be achieved through the restructuring of employment pattern, ownership of share capital in the corporate sector, and the creation of Bumiputera Commercial and Industrial Community (BCIC)¹⁵.

The need to broaden the economic base then became more pressing. Further emphasis was given to shift export earnings from commodities to manufactured goods and services. There were several important considerations that motivated the move. For example, it was found that the employment absorption capacity of manufacturing activities far exceeded that of the agricultural sector. For every job created in the manufacturing industry, two will be created in the services sector to support the manufacturing activity whereas the productivity of the agricultural sector can only be raised by reducing labour through mechanisation. Secondly, Malaysia's labour-force was

¹⁵ See The Second Outline Perspective Plan (1991-2000).

relatively more productive and cost-competitive and these factors provide attractive investment environment for industrial development, especially for resource-based and labour-intensive industries such as rubber products, wood-based products, electronics and electrical goods.

In the early stages of industrialisation, industries were oriented towards the domestic market, mainly for import substitution. However, since the early 1970s, following the introduction of direct measures by the Government, including a wide range of fiscal incentives to attract foreign investment, the situation changed. In tapping the abundance of cheap labour-force, the impetus to growth in the manufacturing sector then focused to the resource-based processing industries, labour-intensive industries and production for export.

At about the same time, Malaysia benefited from the discovery of petroleum and natural gas resources which coincided with the high energy prices arising from the two world oil crises between 1974 and 1979. With additional resources the Government then embarked on ambitious public expansion programmes to meet the objectives of the NEP. These activities boosted economic growth, created business opportunities for the Bumiputera Muslims and greatly enhanced the size of the public sector. However, due to lack of experience, technological knowledge, capital, and managerial expertise, the Bumiputeras were not able to take advantage of the available opportunities, and thus, continue trailing behind the non-Bumiputeras in private sector business ventures.

Throughout the 1970s, the private sector enjoyed a period of sustained boom in commodity prices and huge public expenditures. This decade saw the economic growth averaging about 8.3% per annum at constant prices. The share of public sector expenditure on consumption and investment in aggregate expenditure (GNP) rose from 17% in the late 1950s to 34% in the early 1980s. (See table 2.2 below).

Table 2.2
Malaysia : Aggregate Expenditure as a Percentage of Gross National Product
(at current prices)

Year	1966 - 1970	1971 - 1975	1976 - 1980	1981 - 1985	1986 - 1990	1991 - 1992	1991 - 1993 ¹	1994 - 1995 ¹
Consumption :	80.2	77.7	69.5	72.5	69.2	70.2	10.1	10.6
<i>Private</i>	62.4	60.2	53.1	55.1	53.3	55.8	10.4	10.2
<i>Public</i>	17.8	17.5	16.4	17.4	15.9	14.4	8.9	12.4
Investment :	16.7	24.4	27.4	36.3	28.6	36.7	13.9	11.8
<i>Private</i> ²	10.3	16.6	17.4	19.0	17.6	24.8	15.0	9.8
<i>Public</i>	6.4	7.8	10.0	17.3	11.0	11.9	11.9	15.6
Net Foreign Trade	3.1	-2.1	3.1	-8.8	2.2	-6.9	n.a. ⁴	n.a.
Total %	100.0	100.0	100.0	100.0	100.0	100.0	n.a.	n.a.
Gross National Savings ³	18.2	21.1	30.3	27.4	30.8	30.3	14.9	12.5

Notes : ¹These two columns show the average annual growth rates during the respective periods. The figures for 1994-95 are estimates.

²Includes inventories.

³The figures of Gross National Savings as a percentage of GNP are shown for comparison to the proportions of consumption and investment. They refer to the gross capital formation +/- balance on current account of the balance of payments.

⁴Not applicable/available.

Sources : Money and Banking in Malaysia (1994); Economic Reports, Ministry of Finance, Malaysia (various issues); Mid-term Review of Sixth Malaysia Plan (1993).

Notice during the period 1981-1985, following the counter-cyclical fiscal policy introduced in the early 1980s, the net foreign trade recorded a historic high deficit of 8.8% while the current account balance of payments was posting a deficit averaging 8.5% of the GNP. Although the expanding role of the Government in national development (namely the "*big-push*"), reflected its pro-active goal in promoting sustained economic growth, the large public sector has however, significantly weakened the private sector initiatives and introduced market distortion elements. This weakness

became increasingly evident with the onset of world-wide recession in the early 1980s¹⁶.

2.3.3 Introduction of the Privatisation Policy

The 1980s saw significant structural changes in the Malaysian economy in the midst of the prolonged global recession (while pursuing her goals of the NEP laid down in the earlier phase). Although the country managed to sustain its rate of economic growth, averaging about 6.7% between the period 1981 and 1984, the severity of the recession was finally felt in 1985, culminating in a negative growth rate of -1.1%. In addition, there were also the problems of twin deficits in the fiscal and external balances, brought about by the large public sector expenditures earlier.

Several adjustment programmes, through the use of fiscal and monetary policies, were undertaken to correct the structural imbalance of the economy. In order to reduce the level of public debt, the Government then went on an austerity drive, including budgetary restraint, reducing import-intensive projects and introducing a new policy of downsizing the Government's role in the economy by promoting the privatisation of public corporations. At the same time the Industrial Master Plan was launched, shifting the attention towards the promotion of the private sector activity as the main engine of growth.

With the cyclical economic downturn in many of the industrialised countries, and having the advantage of cost-competitive labour force, the industrialisation plans could not have come at a better time. On the domestic front, realising the fact that the expiry date of the NEP was approaching, and many of the economic achievements for the Bumiputeras were far from targets, the privatisation policy also offers the

¹⁶Investing in the Stock Market in Malaysia (1995 : p. A1).

Government another opportunity to grant special concessions of privatised projects and equity-holdings to the community. There were also incentives and encouragement for the "sharing of expertise and experiences" between the Bumiputeras and non-Bumiputeras. Meanwhile, to ensure the success of the industrialisation plan, there was a liberalisation of the investment policies, generous tax incentives and an extensive support from the public sector, all working in tandem to realise the spirit of Malaysia Incorporated (emulating the concept of Japan Inc.).

Table 2.3
Composition of the Gross Domestic Product by Industry of Origin
(in % and at 1978 constant prices)

Year	1975¹	1985	1990	1991	1992	1993	1994²	1995²
Agriculture, forestry and fishing	27.7	20.8	18.6	16.9	16.5	15.6	14.4	13.6
Mining and quarrying	4.6	10.5	9.7	9.1	8.7	7.8	7.3	6.8
Manufacturing	16.4	19.7	26.8	27.7	28.8	29.4	30.7	31.8
Construction	3.8	4.8	3.5	3.7	3.9	3.9	4.1	4.2
Services	47.5	44.2	41.4	42.6	42.1	43.3	43.5	43.6
Total %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes : ¹This column is based on 1970 constant prices.

²Estimate/forecast.

Sources : Money and Banking in Malaysia, (1994); Economic Reports, Ministry of Finance, Malaysia (various issues).

Consequently, the private sector responded very positively and at its peak during 1988-1991, private investment increased by more than 20% per annum. (However, as we shall see in the next chapter, this has also brought about large current-account deficits and a wide savings-investment gap). The manufacturing sector expanded very rapidly during this period registering an impressive growth averaging 13.6% during 1989-1992, mainly supported by buoyant domestic and external demand. In fact, the

impact of the structural transformation in the economy was felt, as early as in 1986, when the contribution to total exports of the manufacturing sector surpassed the agricultural sector (which has been the traditional mainstay) for the first time, with an export share of 43.5%. The share has since increased further to 77.5% in 1994 which is about 30.7 % of the GDP's total value at 1978 constant prices. Changes in the structural composition of the GDP are shown in table 2.3 above.

The second half of 1980s marked the turning point in the cyclical fluctuation of the country's economic growth. With rapid recovery in 1987, the economy managed to register an average growth of 6.9% for the period 1986-1990. The broadening of the domestic economic base as a result of diversification and industrialisation has enabled the Malaysian economy to be more resilient in withstanding the destabilising effects of the cyclical economic fluctuations of the industrial countries. The success of Malaysia's export diversification programme was clearly reflected by the fact that gross exports grew at an average annual rate of about 17% for the period 1989-1992, at the time when the industrial countries were actually recording less impressive economic growth¹⁷. All these were attributed to the intensified efforts of both the Government and the private sectors that ensured the success of the various programmes and policies. Besides, the investment climate was also relatively more favourable in many of the developing countries in the Far East, drawing considerable foreign capital inflows while benefiting from some improvement and recovery in global economic condition. This in turn paved the way for a period of rapid growth for Malaysia to the end of the decade, which continued into the 1990s.

However, of more relevance here is to determine to what extent has the economic success brought about changes and improvements for the society at large, in

¹⁷ Money and Banking in Malaysia (1994).

particular, the Bumiputera Muslims in enhancing their economic and financial position, vis-à-vis the non-Bumiputeras. We shall address this in the following section.

2.3.4 The Second Outline Perspective Plan

At the end of 1990, the First Outline Perspective Plan (OPP1) expired and with it, the New Economic Policy (NEP), both of which spanned for twenty years (1971-1990). Following this, the Government introduced the Second Outline Perspective Plan (OPP2) which has been formulated based on a fresh policy called the National Development Policy (NDP) to cover a shorter period of ten years (1991-2000)¹⁸. The NDP aims to build upon the achievements of the OPP1 and the NEP to accelerate the process of eradicating poverty irrespective of race, and restructuring society by addressing the issues of social and economic imbalances.

The thrust of the new NDP is balanced development with emphasis on growth with equity. Under this policy, the Government would implement two five-year development plans, the Sixth (1991-1995) and the Seventh (1996-2000) Malaysia Plans. Before examining the experiences during the Sixth Malaysia Plan, we shall take a brief look at the economic position of the Bumiputeras to assess the achievements made by the implementation of the NEP.

2.3.4.1 Economic Position of the Bumiputeras in 1990¹⁹

1. *Poverty Eradication.* The rapid economic development and substantial growth in income brought about a significant reduction in the incidence of poverty among all

¹⁸ The shorter time frame was to reduce the risks of setting unattainable goals and the uncertainties of making development projections based on these goals - (OPP2).

¹⁹ Source : The Second Outline Perspective Plan (1991-2000) and the Mid-term Review of the Sixth Malaysia Plan (1991-95). A more detailed discussion of this issue will be taken up in Chapter 5.

ethnic groups. The poverty level of the Bumiputeras, Chinese, and Indians, dropped from 65% to 23.8%, 26% to 5.5%, 39% to 8.0%, respectively. Consequently, this brought down the overall rate of poverty from 49.3% in 1970 to 17.1% in 1990, slightly higher than the target of 16.7% set earlier.

However, despite the progress made, the inter-ethnic and rural-urban dimensions of poverty continued to be of concern. For instance, the Bumiputera Muslims who were largely found in the rural areas still experienced the highest rate of poverty. Likewise, the mean monthly household income for the community was also the lowest at RM928 (£232), compared with the non-Bumiputeras at an average of RM1416 (£354).

2. *Equity Ownership Restructuring.* At the end of 1990, the Bumiputera managed to acquire only 19.2% of the corporate equity, far short of the 30% target. This compared with 46.8% held by the non-Bumiputeras, and the remaining by foreigners and other nominee companies.

3. *Employment Restructuring.* With regard to the restructuring of society, the achievements again fell short of the targets set under the OPP1. In terms of employment restructuring, the Bumiputera were still overly represented in the agricultural sector registering about 29% of the community's total employment. Likewise, in the administrative and managerial levels in the manufacturing, finance and services sector, the Bumiputera registered 31.3%, far below the target of 49.3% set in 1970. Meanwhile, only 14% of the non-Bumiputeras were found in the agricultural sector, with the remaining 86% found in all the other employment industries.

The failure to achieve many of the NEP's targets has in some ways encouraged the policy-makers to pursue them further, albeit within a new framework. Thus while those positive traits of the NEP were incorporated and reinforced in the NDP, many

approaches were revamped to introduce new elements to reflect the changing economic scenario.

2.3.4.2 The Sixth Malaysia Plan

When the Sixth Malaysia Plan was being formulated in 1990, the economic conditions were very favourable with economic growth reaching its highest rate since 1976, achieving real GDP growth of 9.7%. During the next four years (1991-1994 inclusive) the economy remained buoyant with an impressive average annual growth rate of 8.3% and this is expected to sustain over the next few years.

Table 2.4
Some of Malaysia's Macro-Economic Indicators between 1991 and 1995

Year	1991	1992	1993	1994 ⁵	1995 ⁵
Population (in Million)	18.18	18.61	19.05	19.49	19.96
GNP ¹ (% growth)	82,202 (8.2)	88,190 (7.2)	95,518 (8.7)	103,701 (8.6)	112,118 (8.1)
Per capita GNP ² (% growth)	6,796 (9.2)	7,539 (10.9)	8,126 (8.2)	8,856 (9.0)	9,649 (9.0)
GDP ¹ (% growth)	86,302 (8.7)	93,071 (7.8)	100,838 (8.3)	109,368 (8.5)	118,712 (8.5)
C/A Balance ³	-12,459	- 4,200	- 6,349	- 11,657	- 12,407
Balance of Trade	-6,334	2,217	3,791	111	801
Inflation rate ⁴	4.4	4.7	3.6	3.8	n.a. ⁶

Notes : ¹At 1978 constant prices in RM Million.

²At current prices in RM.

³Current Account Balance of Payments in RM Million.

⁴Based on the Consumer Price Index.

⁵Estimates/forecast.

⁶Not available.

Source : Economic Reports, Ministry of Finance, Malaysia (various issues).

Table 2.4 above, shows some of the country's macro-economic indicators between 1991 and 1995. Meanwhile, the earlier table 2.2 also indicates the growth in private investments and consumption relative to public expenditures, indicating the continuous efforts of the Government to reduce its direct participation in the economy while intensifying the policy of promoting the private sector's lead as the main engine of growth.

The gross domestic product (GDP) at constant prices, increased from RM86.30 billion (£21.58 billion) in 1991 to RM109.37 billion (£27.34 billion) in 1994. Per capita income rose from RM6,796 (£1,699) to RM8,856 (£2,214) over the same period. This is very small by any standard of industrialised countries but is relatively large among the many developing countries in South-East Asia (see table 2.5 below). On the supply side, growth was supported by the continued expansion of the manufacturing sector, increasing at an average annual rate of 12.73% for the four years (1991-1994). This is followed by the construction sector at 12.5% and the services sector at 9.6%. Consequently, the manufacturing sector's share of GDP increased steadily from 27.7% in 1991, reaching almost 31% in 1994, as compared to the agricultural sector which declined from 16.9% to 14.4% over the same period. The former has since remained as the leading source of export earnings, accounting for more than 71% of total exports receipts between 1991 and 1994.

On the demand side, there was an increase in aggregate demand both in terms of public and private sectors consumption. Public sector consumption increased from RM12.94 billion (£3.24 billion) at constant prices in 1991 to RM16.46 billion (£4.12 billion) in 1994; private consumption was much higher at RM51.52 billion (£12.88 billion) in 1994, up from RM44.28 billion (£11.07 billion) in 1991. However, in terms of percentage of GNP at market prices, (as seen in table 2.2 earlier), these figures are not significantly different from the 1986 and 1990 period. What is more interesting to note is the steady decline of public investment from the early 1980s in relation to the increase

in private sector aggressive participation in the economy. During 1991-1992, the latter took up almost 68% from a total investment of 36.7% of the GNP of the country.

Table 2.5
Growth in Real GDP and Per Capita GNP of ASEAN countries
between 1991 and 1994

Year	1991		1992		1993		1994	
ASEAN Countries	Real GDP Growth (%)	GNP Per Capita ¹ (US\$)	Real GDP Growth (%)	GNP Per Capita ¹ (US\$)	Real GDP Growth (%)	GNP Per Capita ¹ (US\$)	Real GDP Growth (%)	GNP Per Capita ¹ (US\$)
Brunei	4.0	n.a. ²	- 1.1	n.a.	- 4.1	11,898	- 2.0	n.a.
Indonesia	6.9	610	6.3	635	6.5	661	6.5	n.a.
Philippines	- 0.5	740	0.1	718	1.7	692	4.2	n.a.
Singapore	6.7	12,890	5.8	13,366	9.9	13,848	10.0	n.a.
Thailand	8.1	1,580	7.6	1,674	7.7	1,780	8.1	n.a.
Malaysia	8.7	2,474	7.8	2,882	8.3	3,009	8.7	3,406
All Industrial Countries	0.6	n.a.	1.5	n.a.	1.2	n.a.	2.6 ³	n.a.

Notes : ¹GNP Per Capita at current prices.

²Not available.

³Estimate.

Source : Economic Report, Ministry of Finance, Malaysia (1994/95).

Throughout the period, the economy was also able to sustain growth with price stability. The consumer price index which measures the inflation rate, fluctuates between 3.8% and 4.7%. In terms of foreign trade, in 1991, Malaysia's balance of trade recorded a large negative balance of - RM6.33 billion (- £1.58 billion) due to sizeable imports of machinery and transportation equipments in the capital-intensive industries. This was temporary, and since then it recorded a surplus balance closing with an estimated RM111 million (£27.75 million) in 1994. Nevertheless, due to the rapid industrialisation process and heavy foreign investments, Malaysia's current account balance of payment has been experiencing negative balance all these years and is forecasted to record a staggering deficit of RM12.41 billion (£3.10 billion) in 1995. This was mainly due to the increase in payments for investment-income abroad and for

services such as freight and insurance. Measures have been taken to improve the situation and the hope is to see the differences narrowed by the end of the decade.

Similar to the experiences of many developing countries, Malaysia's success are not without its problems²⁰. Some of these, which are associated with its financial position, will be discussed in the next chapter. In the meantime, we shall attempt to identify the underlying factors behind Malaysia's economic success as well as examine the problems, prospects and challenges it faced in achieving its goal of becoming a fully-industrialised country by the year 2020.

2.4 The Underlying Factors of Success and Future Challenges

Malaysia's economic achievements have been supported by real increases in output, trade and financing. Although some have regarded the success as a "miracle"²¹, there are several factors that underscore Malaysia's economic achievements. The ability to sustain rapid growth with equity over a fairly long period of time is the result of the Government's liberal, pragmatic and growth-oriented policies which have been formulated with the assistance of the private sector input through the *Malaysia Incorporated* concept. This concept established various platforms for communications and dialogue between the industry and the Government. It is this close public-private sector consultation and co-operation that brought about more rapid institutional changes within the administrative process, and more importantly, created a Government machinery which is sensitive and responsive to the needs of the industry²².

²⁰ See Song, Byung-Nak (1994), *The Rise of the Korean Economy*.

²¹ *The East Asian Miracle*, World Bank (1993).

²² See Tan Keok Yin (1994).

On the other hand, a report by the World Bank²³ suggested that most of the growth has been due to an effective accumulation of physical and human capital, guided by highly diverse public policies. There was also an efficient allocation of these resources to highly productive investments. Besides, the Government's pragmatic and flexible economic policies have helped the country to achieve its macroeconomics stability and rapid growth of manufactured exports, assisted by a significant inflow of foreign capital. In addition, the political and economic stability coupled with good infrastructural support facilities and availability of finance have facilitated further the growth process.

Nevertheless, economic success has often brought with it problems²⁴. There have been warnings that the economy is in danger of overheating and the authorities are currently tackling some of the adverse effects of sustained growth such as increased consumer and public expenditure, rising rates of inflation, more imports and a growing balance of payments deficit. While seeking to apply the brakes to such an economy, the Government at the same time, does not want to inhibit the momentum for growth.

In order to support the private sector's need, Malaysia has embarked on a large scale programme to build up its infrastructure. New airports, power stations, roads and railways are being constructed. Such projects, besides relieving some of the bottle-necks that have built up in the economy, will further fuel growth. However, imports of expensive capital equipments associated with such projects - particularly in relation to yen-denominated Japanese goods - have caused balance of payments problems. Although the problem is regarded as temporary, it will be a long time before the deficit of RM12.41 billion (£3.10 billion) projected in 1995 could be narrowed.

²³ The East Asian Miracle, World Bank (1993).

²⁴ See Bello and Rosenfeld (1990) and Vogel (1991).

Until recently, the main priority of Malaysia's monetary authorities over the last few years, has been the fight against inflation. Encouraged by the buoyant economy and a stock market that rose by almost 100% in 1993, massive amounts of foreign funds have flowed into the country. Speculators have also pushed funds in hoping to gain from the rise in the Malaysian Ringgit. The Bank Negara (the Central Bank), was forced to mop up RM40 billion (£10 billion) in excess liquidity from the banking system in 1993 in order to stop the build up of inflationary pressures in the economy. The problem has recently eased with a relatively stable exchange-rate against the major currencies of the world, while the market interest-rate fluctuates at about 6.83% per annum²⁵.

A recent survey by the Financial Times²⁶ indicated that, of more concern in the long term are a number of structural problems within the economy. Chief among these is a shortage of labour which in turn has led to upward pressures on wages. Malaysia is also in danger of losing competitiveness with wages rising faster than productivity. The survey found there were already signs of a widening wages-productivity gap; in the first six months of 1994, nation-wide wages rose by 7.3% while productivity increased by only 2%. With severe labour shortages in many areas and wages rising, the country is facing growing competition from lower cost producers such as Indonesia, Vietnam and China. In finding a long-term solution to the problem, the Government is now emphasising a new policy of encouraging the manufacturing sector to move into more high-tech, value-added and skills-based industries from the existing labour-intensive plants. However, this will take sometime to materialise and more importantly, will require a lot of foreign expertise and capital.

²⁵ This is the commercial bank's average base lending rate as at year end 1994. The inflation rate is 3.7%. (Source : Bank Negara Malaysia, Annual Report, 1994).

²⁶ Financial Times Survey on Malaysia (various issues).

In the mean time, the country is experiencing severe skills shortages and is known to be spending very little on Research and Development²⁷. Although the manufacturing sector has increased by leaps and bounds over the past decade, the country has a narrow industrial-base : for example, electronics and electrical appliances alone account for about 60% of manufacturing exports. Much of the electronics industry, dominated by foreign multinationals, is still devoted to labour intensive assembly work. While progress has been made in promoting linkages between Malaysian-based multinationals and local manufacturers, well over 50% of the value of electronic exports is made up of imported goods. Another ensuing problem is the reluctance of foreign companies to transfer its technology in assisting Malaysia to move up the high-tech ladder, for reason of wanting to keep their core industrial processes captive. To this end, Malaysia has so far made 904 technology transfer agreements with foreign companies (mainly from Japan, United States and Britain) for technical assistance, licensing and patents, as well as transfer of know-how, largely in the electrical and electronics sectors. However, this has resulted in royalty payments of about RM7 billion (£1.75 billion) and the cost-effectiveness of such moves remains to be seen.

Finally, Malaysia's economic growth has always been driven by its success in attracting large amounts of foreign investment. The inflow of foreign capital is crucial to the success of the country's economic plans, especially in achieving its vision of becoming an industrialised nation by the year 2020. Malaysia is still very dependent on foreign investment; for example, about 60% of the total investment in the manufacturing sector over the past five years came from abroad. Thus, in facing such global economic and financing uncertainties, there arises a need to encourage investment and tap capital resources from domestic sources. The efforts have met with some success but are still far from enough to meet the country's needs. In essence, the economic health of the

²⁷ The current spending in R & D in Malaysia is less than 1% of GDP as compared to 2 to 3% in developed countries.

country is, to a certain extent, dependent on a range of forces outside its control. For example, the United States and Japan together accounted for more than 30% of Malaysia's exports and the latter alone accounts for nearly 25% of foreign investment in the country, much of it in important projects such as production of the Proton car. Thus any serious downturn in the economy of Japan would have serious consequences not only for Malaysia but also for many other economies in the region. This was clearly felt during the Kobe earthquake disaster early this year, resulting in many of the region's stock exchanges experiencing a bearish market.

2.4.1 Outlook for 1995 - 2000

Despite the many challenges mentioned above, the Government is very optimistic about the future of the economy. The relevance of their arguments are reflected in the Mid-Term Review of the Sixth Malaysia Plan (1991-1995) which reviewed the economy's performance after its implementation in 1991. The report revealed that most of the key economic indicators of the country achieved during 1991-1993 period had far exceeded the planned target. Table 2.6 below indicates some of the achievements in comparison to its target. At the rate the economy is growing, and taking into consideration the development in the region's emerging economies, the country's outlook for the remaining five years into the next century is very positive and most of the targets for the Seventh Malaysia Plan (1996-2000) are expected to be attainable.

It is anticipated that the Government will continue to reduce its role in the economy, withdrawing its direct investment from the business sector while concentrating its function as an efficient facilitator and effective regulator in the market. The Bank Negara (Central Bank) will continue to be vigilant over the stability of its exchange rate and prices. Meanwhile, the Government will continue to promote the growth of the private sector through several investment incentives. The current taxation

system will also be restructured so as to be more attractive to foreign investors and competitive with others in the region.

Table 2.6
A Comparison of the Sixth Malaysia Plan's Target and Achievements
as at year end 1993

Real Growth in ...	Average Annual Growth Rate (%)	
	Sixth Malaysia Plan Target 1991-95	Achieved During 1991-93 Period
Gross Domestic Product	7.5	8.1
Manufacturing sector	11.5	12.3
Exports	12.2	14.7
Imports	10.5	12.8
Consumption	6.4	6.3
<i>Private</i>	6.4	5.9
<i>Public</i>	6.4	7.7
Investment	7.0	12.0
<i>Private</i>	8.6	13.0
<i>Public</i>	3.0	10.0
Total Investments ¹	34.9	36.3
Gross National Savings ¹	34.1	32.7

Note : ¹As a percentage of Gross National Product.

Sources : The Sixth Malaysia Plan (1991-95) and Mid-Term Review of the Sixth Malaysia Plan (1993).

Over the next few years, ASEAN and many Asian countries are expected to continue to enjoy high rates of growth averaging 7.8% and 7.0% per annum respectively. This positive outlook would be further reinforced by the expected recovery of the industrialised countries' economies which would then create higher external demand. A recent report indicated that Asia's developing nations account for about 15% of world trade, estimated at US\$3.6 trillion in 1993, as compared to under 11% a decade ago²⁸. Their pro-rata shares of the US\$755 billion-a-year boost to global trade in goods that GATT projects by 2005 would be US\$116.3 billion (See table 2.7 below). In 1992 alone, eight of the East Asian nations produced 73% of all developing-country exports of manufactures (including textiles and clothings).

²⁸ Far Eastern Economic Review, April 28, 1994.

Table 2.7
Country Shares in World Trade in Goods as at 1992

No.	Countries	Exports (US\$ billion)	Share of World Trade (%)	Pro-rata share of Trade Gain (US\$ billion)
-	World	3,731.0	100.0	755.0
-	Japan	340.0	9.1	68.7
-	Developing Asia	573.2	15.4	116.3
1	Hong Kong	119.5	3.2	24.2
2	China	85.0	2.3	17.4
3	Taiwan	81.5	2.2	16.6
4	South Korea	76.6	2.1	15.9
5	Singapore	63.5	1.7	12.8
6	Malaysia	40.6	1.1	8.3
7	Thailand	32.5	0.9	6.8
8	Indonesia	29.3	0.8	6.0
9	India	19.6	0.5	3.8
10	Philippines	9.7	0.3	2.3
11	Pakistan	7.3	0.2	1.5
12	Sri Lanka	2.6	0.06	0.5
13	Bangladesh	2.1	0.06	0.5

Notes : Countries not shown include : Brunei, Cambodia, Vietnam, Laos, Macao, Burma, Nepal.
Figures above include re-exports.

Sources : GATT and IMF (as in Far Eastern Economic Review, April 26, 1994).

World Bank and OECD studies have suggested most of the overall economic benefit will accrue to developing Asia, with less for Latin America and virtually none for Africa.

With two more giant economies emerging (China and India) in Asia, the future looks bright for Malaysia's economy to achieve greater heights. However, set against an increasingly open and competitive global economy, Malaysia's main challenge is to build upon and manage its current economic success for sustained growth, price stability and equitable distribution of wealth. This means finding solutions to issues which have emerged as a result of the rapid growth of the economy. As competitions in external funding and wages/productivity increase, Malaysia will need to increase its reliance on domestic demand and domestic capital. The manufacturing sector will remain to be the

principal engine of growth but the strategy in the next phase will be, firstly, to shift to the high-tech value-added production, and secondly, to broaden and diversify its industrial base by encouraging investments in resource-based industries.

This shift in the industrial development has become very necessary in view of the erosion of Malaysia's ability to offer relatively cheap labour in recent years, especially when the economy has reached full-employment. Value-added production would not only assist in easing the pressure of labour costs on production, but would also ensure the acquisition of better and more advanced technology²⁹. In short, the outlook for the remaining years in the century is positive and the economic policies is expected to be directed towards strengthening the domestic sources of growth by maintaining macro-economic stability, promoting efficiency and productivity, while expanding and diversifying the industrial sector³⁰.

2.4.2 Challenges Facing the Bumiputera Muslims

On the domestic front, perhaps an equally pressing issue that needs to be appraised is the future challenges facing the Bumiputera Muslims in charting their economic and financial position vis-à-vis the non-Bumiputeras in the next few decades.

The aspirations of the Government as articulated in the *Vision 2020* were to see the community attaining the level of economic development and competencies in all areas such that they would be able to withstand rigorous competition and be on "equal footings" or at par with their non-Bumiputera counterparts in conducting economic activities. Although the Government is expected to continue granting concessions, the experiences during the NEP showed that, there was a limit as to what could be done to

²⁹ See Tan Keok Yin (1994).

³⁰ MIER Reports - Outlook for 1990s.

enhance a community's economic position. Already, the Government has started to either remove or reduce financial assistance in areas which were found not to be efficient or effective. The idea was to inculcate some positive elements among the Bumiputeras in the course of improving their economic situation. The community needs to develop the culture of self-reliance and resilience in facing challenges, having a positive attitude and pro-active outlook, a willingness to accept risk in business ventures and to compete in a free market enterprise. As we shall see in later chapters, many of these factors were often lacking among the community.

2.5 Summary

In summary, the aim of this chapter was to provide a brief perspective of the Malaysian economy, examining its experiences of growth, development and the structural changes that have taken place since the country's independence in 1957. It has provided an important background and laid an initial foundation for more detail discussion of specific issues in later chapters. Following this, the next three chapters will relate several pertinent issues faced by the Bumiputera Muslims in their effort to enhance the community's participation in the corporate sector.

The chapter began by describing Malaysia's economic achievement in sustaining growth with equity and price stability over a fairly long period of time. The economy registered an average annual growth rate (real GDP) of more than 8.7% for the past seven consecutive years. However, despite its impressive growth and development, the country has its own share of shortcomings and problems that must be resolved especially in the course of achieving its goal of becoming a developed nation by the year 2020. Sustained growth generally results from a stable interplay of social, economic and political forces. In multi-ethnic Malaysia, socio-economic stability is very significant in ensuring continuity of success. This was among the rationales for introducing the policy

of equitable distribution of corporate equities among the various ethnic groups. However, despite several measures taken (since 1971) to achieve a certain target that will narrow the gap of equity ownership among the communities, the achievement remains far from its desired level.

The stages of growth and structural transformation have been discussed in several phases beginning from the 1960s to the year 1994. Among the phenomenal experiences were the introduction of the Industrial Master Plan, the Malaysia Incorporated concept, the privatisation of public corporations, the downsizing of the Government's role in the economy, the shift of attention towards promoting the private sector as the main engine of growth and the aggressive promotion of direct foreign investments.

It is important to realise that, apart from the objective of reducing public-sector expenditures, the Government's privatisation policy also provides an extensive opportunity for the policy-makers to promote and increase the Bumiputera Muslims' level of corporate sector ownership. Based upon the ideals of the New Economic Policy, the authorities accommodated some forms of positive discriminatory approach in the allocation of privatised projects. A large proportion of the latter was specially accorded for the community. The success of this arrangement in enhancing a broad-based investment participation and equity ownership in the capital market among the Bumiputera Muslims, will be described in later chapters.

Finally, the chapter examined the underlying factors behind Malaysia's economic success and evaluated its prospects and future challenges in achieving the many long-term goals of the country's economy. The achievements have been attributed to several factors such as the employment of effective methods in accumulating physical and human capital, efficient allocation of resources to productive investments, flexible economic policies, macroeconomics stability, good infrastructural support facilities, and

above all, a stable political and social climate. The problems faced took the form of increasing consumer and public expenditures, rising inflation rate, widening of the savings-investment gap, growing current account balance of payment deficits, acute shortages of labour and skilled manpower, upward pressures on wages, a widening wages-productivity gap, and an uncertainty of future foreign capital inflows. However, despite the many challenges, the Government is still optimistic for the future of the economy.

What remains uncertain though, is the ability of the Bumiputera Muslims to tap the immense potentials in the expanding economy to enhance their roles in the socio-economic development of the country. The aspirations of the Government as articulated in the *Vision 2020* were to see the community attaining the level of competencies at par with their non-Bumiputera counterparts in almost in all areas. To what extent they are able to live up to these expectations while simultaneously withstanding the rigorous competition in an open free market economy, remains to be seen.

Another important complementary factor that warrants equal attention from the policy-makers is ensuring the existence of an effective and efficient financial system. The next chapter will explore the extent of development, financial deepening and reforms that have taken place in the Malaysian financial system which have also contributed to the country's economic progress. By examining the achievements made in the economy, as well as the progress and development in its financial system, it will enable us to assess the economic position of the Bumiputera Muslims, and appraise the potential of enhancing their corporate sector participation.

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CHAPTER 3

DEVELOPMENT AND FUTURE CHALLENGES OF THE MALAYSIAN FINANCIAL SYSTEM

3.1 Introduction

The development of an efficient financial system in harnessing sufficient resources has been recognised as an important factor in promoting rapid economic growth in a country¹. This development, often referred to as the process of *financial deepening*, involves the design and implementation of policies to increase the monetisation of the economy, foster and develop a sound and diversified financial structure with co-ordinated money and capital markets while at the same time maintaining monetary stability². In this respect, the Malaysian financial system may be considered as fairly well-developed when compared to several other countries at a similar stage of economic development³. In tandem with the rapid growth and structural changes in the economy, the financial system has also experienced radical transformation over the past three decades. This development was in consonant with the macroeconomic policies and strategies of having a well-developed market-oriented economy, geared towards modernisation and industrialisation of the country.

In examining these transformations, it is relevant to appreciate some of the empirical evidences and literature that have been written in this area. Beginning with the seminal works by McKinnon and Shaw in the early 1970s, there began active research

¹For detail discussion of financial deepening and the role of financial development as a means of accelerating economic growth of developing countries, see Shaw (1973) and McKinnon (1973).

²Money and Banking in Malaysia (1994 : Chapter 2).

³See World Bank's World Development Report (various issues).

into the importance of financial development in the context of economic development, especially with regard to developing countries. Based on these works, there arise two schools of thought with different policy prescriptions in suggesting methods of enhancing economic growth⁴. The first is the *financial structuralist* view which maintains that a widespread network of financial institutions and a diversified array of financial instruments will have a beneficial effect on the savings-investment processes and hence, on growth. The other is the *financial repressionist* view which considers low real interest rates, caused by arbitrarily set ceilings on nominal interest rates and high and variable inflation rates, as being the major impediments to financial deepening, capital formation and growth; in this case, the suggestion is to liberalise the interest rates to find their equilibrium levels in a free market environment.

While chapter two explored the experiences of growth and structural changes in the Malaysian economy, this chapter attempts to examine some diverse experiences in the country's financial system which encompasses the *banking system*, *non-bank financial intermediaries* and *financial markets*. As we shall see later on, these experiences include both the *structuralist* and *repressionist* viewpoints. Recognising the extent and scope the topics cover, we shall examine the development of the financial markets separately in the next chapter. Meanwhile, this chapter will provide a broad overview of the system, focusing on its progress (corresponding to the economy), structural transformation and several monetary policy changes which have brought about considerable financial liberalisation, deepening and innovations within the wide spectrum of institutions it covers.

As a consequence of the significant changes, the Malaysian financial system has developed at a very encouraging pace relative to many other developing countries of *the South*. Apart from its banking system, which has been able to mobilise substantial

⁴ See Gupta (1984).

savings from the public to finance economic growth, the Kuala Lumpur Stock Exchange has also expanded from an insignificant entity of the financial system to become one of the largest stock exchanges in the Far East region. As for the banking institutions, the scope for expansion and widening their range of services to complement the existing savings and deposit accounts remains extensive.

As in the previous chapter, the aim of examining these experiences is to enable us to relate and assess the extent to which the Bumiputera Muslims community has been able to capitalise on the economic opportunities created through such developments to enhance their financial position and equity ownership of companies. This provides a relevant background and basis for us to appraise the potential and prospect of increasing their participation in the capital market. Later, we shall also examine whether the development of the Islamic banking system and establishment of the Islamic brokerage house have, in any way, influenced the level of the community's involvement in share trading.

The chapter comprises seven sections. Section two offers a brief overview of the financial system and is followed by section three which discusses the development in the banking system. The latter encompasses the commercial banks, the Islamic banking system and the non-monetary institutions such as the finance companies, merchant banks and discount houses. Section four briefly examines the function of a relatively small non-banking financial intermediaries which complement the role of the banking system. Apart from the employees provident and pension funds, these intermediaries only make up about ten per cent of the total assets of the financial system and hence are less significant than the banking institutions. Section five analyses the process of financial deepening and structural transformations in the financial system. This is followed by a discussion of the savings-investment gap which also examine the sources of capital flow and the determinants of savings in the country. Finally, section seven provides a summary and concludes the chapter.

3.2 An Overview of the Malaysian Financial System

The process of financial deepening and innovations in the Malaysian financial system has proceeded rapidly, especially during the second-half of the 1970s. Apart from the effect of several pragmatic financial policies, the growth of the system has been, to a large extent, influenced strongly by developments in the external sector, which have accounted for most of the sources of growth in the economy⁵. This resulted in the rapid expansion of the financial sector, especially in the banking system, in order to meet the demand of the market place. Besides the proliferation of new financial institutions and financial instruments, there was a marked increase in the volume of transactions done within a wide range of financial services offered.

In essence, the development of the financial system and the role it played in mobilising and allocating financial resources efficiently, reflected the trends of development in the economy itself. For example, during the 1960s and 1970s, the ability of the Government to contain domestic inflation and achieve a strong external position in the balance of payments was basically due to its conservative fiscal and cautious monetary policies. The financing of the fiscal deficits were mainly from domestic non-banking sources and external borrowings were kept to a minimum. However, the situation changed in the first-half of the 1980s when the Government reversed its policy in favour of fiscal expansion. There were substantial deficits in the federal budget and the current account balance of payments. As Ahmad (1991) aptly pointed out, during the period, the Malaysian currency (the *Ringgit*), was very much overvalued and did not reflect the underlying economic fundamentals. Much of the demand for credits was in support of a speculative property boom until its collapse in 1985 with the economic

⁵ See Ahmad (1991). For example, in the 1970s, the major source of growth was basically due to the sharp upturn in the prices of primary commodities while in the 1980s, growth was brought about by a strong upturn in the manufactured exports.

recession⁶. The recovery in 1987 was supported both by improvements in the external demand and a sharp correction of the exchange rate⁷.

Meanwhile, efforts toward reforming the financial system to restore confidence and strengthen areas most affected by the recession continued over the years. This was particularly felt in the banking sector, with improved regulations to instil greater discipline and supervision in the banking community. A series of crucial measures were taken to address the problems of mismanagement, over-exposure and excesses, as well as the escalation of bad-debts arising from the severe economic downturn earlier. Many of these reforms were implemented through several programmes aimed at strengthening the financial infrastructure. Consequently, the system experienced greater financial liberalisation. Among others, the reformations included the introduction of a more flexible system of interest rate determination, relaxation of lending guidelines, simplification of rules and procedures, implementation of a minimum capital adequacy requirement, a dispersion in the ownership of equity in the financial industry, a limitation on credit to individual customers, a suspension of interest on non-performing loans, and levelling of the playing field for different groups of financial institutions in the country so as to promote greater competition. These reforms culminated in the enactment of the comprehensive Banking and Financial Institutions Act of 1989 (BAFIA).

Apart from the banking sector, the capital market has also evolved rapidly, to complement the banking system in funding the economic expansion for long-term financing. Prior to 1989, funds raised in the capital market were generally dominated by the public sector which issued its debt papers to finance its development expenditure. However, in line with the Government's policy of downsizing its role in the market, the

⁶ See Table 2.1 in chapter 2 for the growth trends in GDP.

⁷ The exchange rate declined by about 25% during the 1985-1989 period.

amount of funds raised by the private sector in the secondary market increased significantly. In 1980, the volume of funds mobilised by the Kuala Lumpur Stock Exchange was only RM151.1 million (£37.78 million); by the end of 1994, the size of funds raised had increased to RM10.12 billion (£2.53 billion) from a total volume of transaction worth RM328.1 billion (£82.03 billion)⁸. We shall appraise the development of the capital market exclusively in the next chapter for a more in-depth analysis.

3.2.1 Structure of the System and Growth in Assets

In general, a country's financial system consists of three main components : (i) a variety of interconnected financial institutions, (ii) a set of financial markets and (iii) a series of financial instruments and services⁹. The products of the *financial institutions* in the form of *financial instruments and services*, are then transacted by the market-players within the *financial market*. Thus, the institutions act as the intermediaries and the market as a forum, for the mechanisms of trading and exchange, supervised and regulated by the rules and regulations of the governing authorities overseeing the running of the system.

As in many other countries, the Malaysian financial system is basically made up of three broad categories : the banking system, the non-bank financial intermediaries and the financial markets. Within the financial markets are the capital market, the money and foreign exchange markets, the commodity futures market and the financial futures and options markets¹⁰. Most of the banking institutions in Malaysia operate in

⁸ Investing in the Stock Market in Malaysia (1995).

⁹ See Gillis, et. al. (1992).

¹⁰ Although the financial futures and options markets have yet to operate, all the necessary preparations have been made for their launch, which has been postponed to sometime in late 1995. The debacle of Barings forex dealings in Singapore earlier in the year has, to a certain extent, contributed to the delay. The Finance Ministry is now seeking further assurance from the regulators to ensure effectiveness and efficiencies of supervision in the two markets before they commence operation.

its two principal financial markets, that is, the capital market and the money and foreign exchange markets. The structure of the financial system is illustrated in Chart 3.1 on the following page; and the growth in assets of the financial system between the period 1960-1994 is shown in table 3.1 below.

Table 3.1
Assets of the Malaysian Financial System between 1960 and 1994
(in RM Billion)

SECTORS	1960	1970	1980	1990	1994	(%) ⁴
Banking System :	2.4	7.5	54.3	226.9	441.7	70.3
Monetary Institutions :-	2.3	6.9	45.2	171.6	335.3	53.4
<i>Central Bank</i>	0.2	2.2	13.0	40.9	92.8	14.8
<i>Currency Board¹</i>	0.9	0.2	---	---	---	---
<i>Commercial Banks²</i>	1.2	4.5	32.2	130.7	242.5	38.6
Non-Monetary Institutions :-	---	0.6	9.2	55.4	106.4	16.9
<i>Finance Companies</i>	---	0.6	5.6	39.5	73.5	11.7
<i>Merchant Banks</i>	---	---	2.2	11.0	23.6	3.7
<i>Discount Houses</i>	---	---	1.3	4.9	9.3	1.5
Non-Bank Financial Intermediaries :	1.2	4.2	19.8	102.4	186.5	29.7
Provident, Pension and Insurance Funds :-	0.8	3.2	13.8	61.6	117.8	18.8
<i>Employees Provident Fund</i>	0.6	2.3	9.5	46.7	84.5	13.4
<i>Other Provident Funds</i>	0.1	0.5	1.9	5.4	12.3	2.0
<i>Life Insurance Funds</i>	0.1	0.3	1.7	7.1	14.9	2.4
<i>General Insurance Funds</i>	---	0.1	0.8	2.4	6.1	1.0
Development Finance Institutions	---	0.1	2.2	6.1	9.7	1.5
Savings Institutions	0.3	0.6	2.5	8.5	15.7	2.5
Other Financial Intermediaries	0.1	0.2	1.3	26.1	43.3	6.9
Total	3.6	11.6	74.2	329.3	628.2	100.0
As % of GNP at current prices	n.a. ³	99.8	144.3	298.8	356.3	---

Notes : ¹Malaysia's estimate share of assets of the Currency Board. The Board ceased to function with effect from 30th. November 1979, following its liquidation and the final distribution of its assets to the three participating Governments of Malaysia, Singapore and Brunei.

²Figures in 1990 and 1994 include Bank Islam Malaysia.

³Not available.

⁴This column refers to the percentage of figures for 1994.

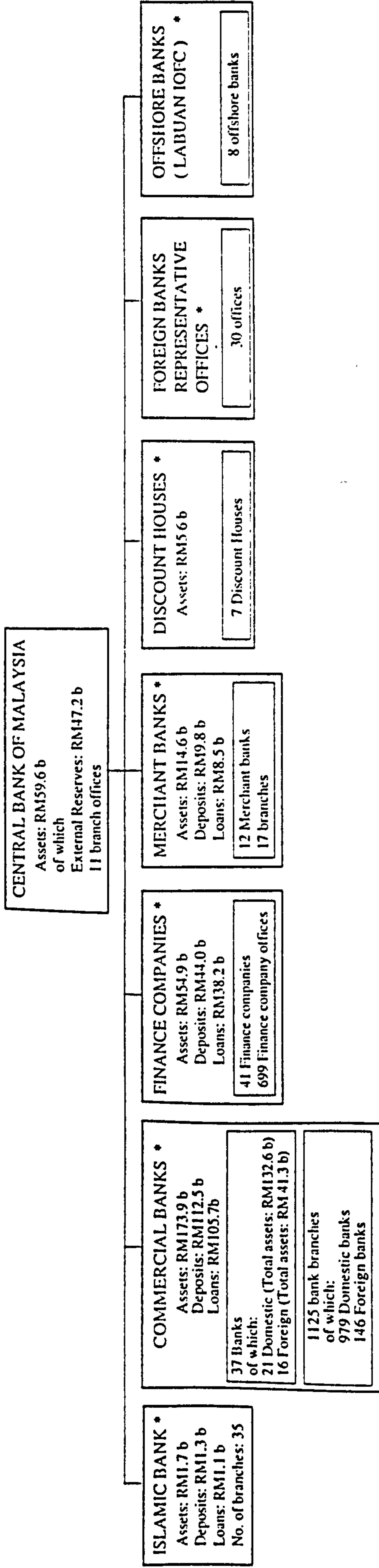
Source : Bank Negara Malaysia, Annual Reports (various issues).

Chart 3.1

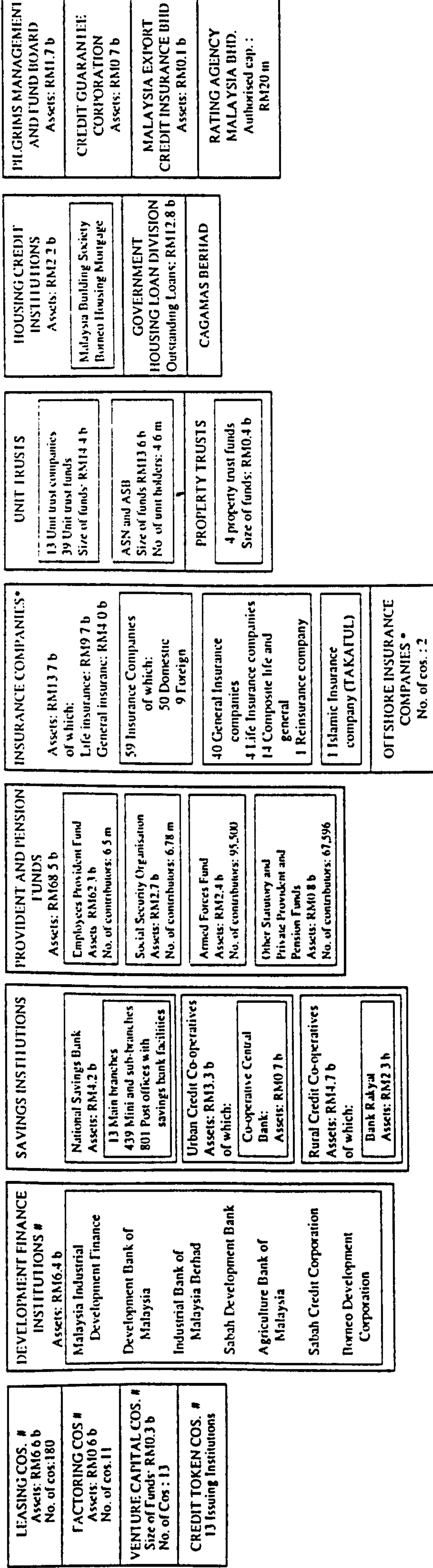
THE FINANCIAL SYSTEM STRUCTURE

As at June 14, 1993

THE BANKING INSTITUTIONS



NON-BANK FINANCIAL INTERMEDIARIES



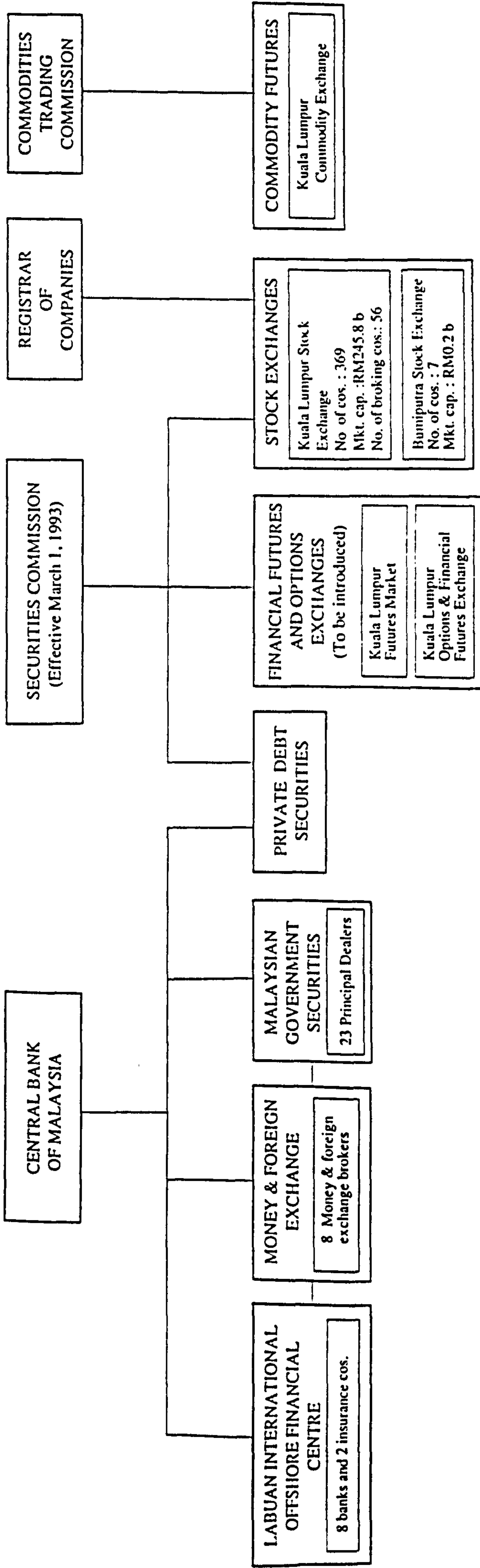
* Supervised by the Central Bank.

Registered with the Central Bank.

Chart 3.1 (Continued)

THE FINANCIAL SYSTEM STRUCTURE

THE FINANCIAL MARKETS



As can be seen from the table, total assets of the financial system rose significantly from a mere RM3.6 billion (£0.9 billion) in 1960 to a staggering RM329.3 billion (£56.8 billion) in 1990, reflecting an average growth rate of about 16% per annum for thirty years. However, during the period 1989-1993, the rate of growth was much higher at about 18% per annum; and by the end of 1994, the total assets recorded was RM628.2 billion (£157.05 billion), equivalent to about 3.6 times the nation's nominal GNP. The growth was mainly due to the increase in assets of the banking system, from 67% in 1960 to 70.3% of total assets in the financial system in 1994. This also reflects the process of broadening in the market and the rate of financial deepening that have taken place throughout the period. Concomitantly, the commercial banking system, being the most vital component of the system, has always remained as its main financial intermediary.

We shall next discuss briefly each of the components of the Malaysian financial system as illustrated in chart 3.1.

3.3 The Banking System

The major components of the banking system are (i) the *monetary institutions* comprising the Central Bank (or *Bank Negara*) and 38 commercial banks including one Islamic Bank¹¹; and (ii) the *non-monetary institutions* comprising 40 finance companies, 12 merchant banks, 7 discount houses, 30 foreign banks representative offices and eight money and foreign exchange brokers.

¹¹ Although the facilities offered by the Islamic Bank Malaysia are generally similar to those provided by the commercial bank, it is immune to the BAFIA of 1989 and is being regulated by a separate Islamic Banking Act of 1983. Nevertheless, it still remains under the purview of the Central Bank.

The development of these institutions over the past three decades, was achieved through the rapid build-up of the branch network, the widening of the range of banking services and the acceleration of the credit facilities. Indeed, the banking system has experienced several structural changes, recording a remarkable growth over this period. Total assets of the banking system rose from RM2.4 billion (£0.6 billion) in 1960 to almost RM442 billion (£110.5 billion) by the end of 1994, at an average annual growth of 16.6% for thirty-four years.

As a group, the commercial banks are the largest institution in the financial system. These banks offer a full range of standard banking services normally expected of a commercial bank. Among others, these include accepting demand deposits, accepting deposits of various maturities, issuing negotiable certificates of deposits, offering short-term financing for working capital, trade bills and bankers acceptances, and dealing in foreign exchange and gold. Lately, the commercial banks have also been increasingly involved in providing investment advisory services.

Apart from the commercial banks, there are also the non-monetary institutions such as the finance companies, merchant banks and discount houses. The finance companies are the second largest mobiliser of deposits and provide mainly consumer and housing credits to individuals. The merchant banks were established to supplement and complement the facilities provided by the commercial banks and finance companies. Discount houses, on the other hand, specialise in short-term money market operations¹². It is not difficult to differentiate between the various types of institutions in the banking system for their functions have been carefully defined by law to ensure a highly segmented market. They could easily be recognised by the types of liabilities they are legally allowed to mobilise, the types of assets they can hold and the services they

¹² See Lin, See Yan (1992) for more detail explanation of their operations.

rendered. All the activities of the institutions within the banking system are governed by the guidelines and regulations of the Central Bank based on the BAFIA of 1989¹³.

3.3.1 Development of the Commercial Banks

A significant feature in the development of banking in Malaysia was the rapid rise of the locally incorporated banks and the sharp decline in the position of foreign banks. This development occurred within the ten years span after independence from the British and the establishment of the Central Bank later in 1959. In 1960, the foreign banks continued to dominate the financial system, both in terms of assets and mobilisation of funds, monopolising 72% of loans¹⁴. During the period, there were only 26 banks with 111 branches and of these, only 6 were domestic banks with 12 branches throughout the country, controlling a share of less than 10% in the total deposits and assets. However, the position of the foreign banks deteriorated over the years and by 1970 their dominance was completely eroded. A number of factors were responsible for this decline. The most important were : firstly, the introduction of a new regulation in 1966 that prohibited the foreign banks from establishing any new branch in the country; secondly, and more importantly, was the consequence of the Government's *New Economic Policy* (1971-1990) which encouraged the setting up and hence, prompted the growth of locally incorporated banks. These banks were also to pursue, among others, the NEP's objectives in restructuring the corporate sector, as well as enhancing the financing opportunities of the Bumiputera Muslims.

¹³ The Act defines, categorically, the operational definition of each type of financial institution, the market in which each could operate and the rules and guidelines which each should follow. Competition across sectoral lines, such as between the commercial banks and the merchant banks for business are therefore limited.

¹⁴ See Ahmad (1991).

The early phase of development in the banking system was largely associated with the growth of foreign trade and general commerce. A large number of foreign banks established themselves in the trading and commercial centres of big cities in the country to serve the interests of foreign establishments, especially for the transactions of foreign trade. At that time, most of the domestic banks were owned by the Chinese and were initially formed as small family concerns, serving the needs of businessmen from their own clans.

Recognising the importance to develop a full-fledge *Malaysian-oriented* banking system to facilitate a balanced economic development, the Government then introduced several structural transformation programmes which included promoting public-ownerships of commercial banks, providing larger incentives for the growth of domestic banks, facilitating the growth of branches throughout the country, lowering the licensing fees for bank expansions and many others. The foreign banks which were established as branches or subsidiaries of their parent-companies, were reoriented in their operations to cater to domestic needs. At the same time, the domestic banks were regulated to be more sensitive to the economic policies of the Government. The authorities recognised that a strong domestic banking industry was among the necessary pre-requisites for a steady and balanced economic and social development in a young country like Malaysia¹⁵.

As a result, by the end of 1994, there were a total of 37 commercial banks (only 14 were foreign-owned) with more than 1280 branches distributed throughout the urban and rural areas of the country. The institutions aim to generate a system of effective mobilisation and efficient allocation of capital resources between competing uses to promote economic growth. There are currently 23 domestic banks accounting for 89%

¹⁵ For further discussions on the role of banking and finance in economic developments, see Gillis, et. al. (1992), Meier (1989), McKinnon (eds. 1976) and Thirlwall (1976).

of the total number of branches, controlling 77% of the total deposits and more than 80% of the total assets. Over time, the family-owned shareholding structure of these banks also changed and by the end of 1994, nine of them were listed on the Kuala Lumpur Stock Exchange (KLSE). However, among the domestic banks, there are only a few very large ones which dominate the whole banking institution. In fact, the combined assets and branch networks of the first two largest banks (which are Government-owned), accounted for more than 35% of the total assets and branch offices of the entire commercial banks community. The degree of concentration in the commercial banking industry has always been high with the first ten largest banks controlling about 80% of the total deposits.

With the advent of computer technology, the banking services have expanded and improved to provide Automated Teller Machines (ATM), computerised cheque clearing system, payment of daily interest, courier banking, home and on-line telephone banking, auto debits and a host of other facilities commonly found in a developed banking system of industrialised countries. The growth of branch networks has also reduced the number of customers served per office from more than 20,000 persons in 1988 to about 15,000 by the end of 1994.

Currently, with the implementation of BAFIA, the foreign banks in Malaysia may technically be considered as non-existent because since 1st. October 1994, all the foreign banks have been required to be incorporated locally as domestic banks. This policy reflects the desire of the authorities to have these banks to be more committed to the development of the country. Although a one hundred percent foreign ownership after incorporation is still allowed, the existing restriction on opening new banking offices will continue to be enforced. However, the foreign banks would then be supported by permanent paid-up capital in Malaysia and bear the advantage of being subjected to the same capital adequacy requirement as the local banks. Nevertheless, there are still several other provisions that are only applicable to the foreign banks. These measures

are generally not discriminatory but carry the goal of promoting more dynamism in local financial institutions.

3.3.2 Development of the Islamic Banking System

The Islamic banking in Malaysia began with the establishment of Bank Islam Malaysia in 1983 which is currently the only one of its kind in the country. Its establishment was made possible with the enactment of the Islamic Banking Act (1983) which allows the bank to operate on Islamic banking principles. In order to facilitate the bank to comply with the prescribed liquidity requirements as well as to park its temporary idle funds, the Government Investment Act (1983) was enacted to enable the Government to issue Islamic Government bonds. In this regard, it was claimed that Malaysia was the first country in the world to issue Government bonds on an Islamic basis.

Bank Islam Malaysia commenced operations in 1983 with only a single branch and assets of RM171 million (£42.75 million). By the end of 1994, it has grown considerably and has a network of 52 branches throughout the country. It has a total resources of more than RM3 billion (£0.75 billion), of which investment deposits accounted for RM1.9 billion (£0.48 billion), whilst savings and demand deposits accounted for RM422 million (£105.5 million) and RM578 million (£144.5 million) respectively. The volume of financing extended by the bank also increased from RM41 million (£10.25 million) in 1983 to RM1.24 billion (£0.31 billion) by December 1994. Earlier on, in January 1992, the bank moved into public-ownership and is currently one of the nine commercial banks that are listed on the Kuala Lumpur Stock Exchange.

In terms of regulations, the bank is still required to adhere to the same regulatory rules as other commercial banks offering conventional banking products and services.

However, in line with its objectives, the activities of the bank are based on the Islamic principles of banking and credit conforming with the *Shari'ah* (Islamic law). Nevertheless, the bank's growth and development over the past twelve years have shown that, with prudent management and effective marketing strategies, an Islamic bank is a viable banking institution, even if it is operating within a non-Islamic economic system.

The long-term objective of the Central Bank has been to create an Islamic banking system to function on a parallel basis with the conventional system¹⁶. However, a single Islamic bank or even a few Islamic banks do not constitute a system. A banking system, whether Islamic or conventional, would require three vital ingredients to qualify as a system. They are : (i) a large number of players; (ii) a broad variety of instruments; and (iii) an Islamic inter-bank market. There must be an efficient and effective interbank money market to link the players (institutions) and the instruments.

To achieve the first requisite, the Central Bank introduced a scheme called IFB-scheme¹⁷, which allows the existing conventional financial institutions to offer Islamic banking services (through Islamic windows) using their existing infrastructure and branches. Initially, only three of the country's largest commercial banks were involved. By the end of 1994, within a span of twenty months, apart from Bank Islam Malaysia, a total of 21 commercial banks, 13 finance companies and 3 merchant banks with a total branch networks exceeding one thousand, were already offering Islamic banking services under the IFB-scheme. The number is expected to grow as more financial institutions may decide to participate in order not to be left behind in an increasingly competitive environment. Table 3.2 below provides some information on the recent development of the Islamic banking system.

¹⁶ See Bank Negara Malaysia Annual Report (1993) for detail discussion of this section.

¹⁷ The scheme was launched on a phase by phase basis beginning on March 4, 1993 and was named "Skim Perbankan Tanpa Faedah" (Interest-free Banking Scheme) or IFB-scheme in short.

Table 3.2
Development of the Islamic banking system in Malaysia as at end of 1994

At Year End 1994	Bank Islam Malaysia	Other Institutions offering IFBS¹	Total
Number of Financial Institutions	1	37 ²	38
Number of Branches	52	1000 ³	1052
Number of Account-holders ³	500,000	85,000	585,000
Total Assets Accumulated (in RM billion)	3.1	2.1	5.2
Total Financing Extended (in RM billion)	1.24(73%)	0.46(27%)	1.7(100%)
Total Deposits Mobilised (in RM billion)	2.9(61.7%)	1.80(38.3%)	4.70(100%)
of which :			
<i>Investment Deposits</i>	1.90	1.40	3.30(70%)
<i>Savings Deposits</i>	0.42	0.05	0.47(10%)
<i>Demand Deposits</i>	0.58	0.28	0.86(18%)
Placements of Deposits (in RM billion)	n.a. ⁴	n.a.	4.70(100%)
<i>by Individuals</i>			2.21(47%)
<i>by Public Sector</i>			2.11(45%)
<i>by Financial Institutions</i>			0.11(2%)
<i>and Others</i>			0.27(6%)

Notes : ¹ All other conventional financial institutions offering Islamic banking services under the interest-free banking scheme or the IFB scheme.

² This comprises 21 commercial banks, 13 financial companies and 3 merchant banks.

³ Estimates.

⁴ Not available.

Source : Bank Negara Malaysia Annual Report, 1994.

With the increasing number of financial institutions offering Islamic banking services, the operations of the Islamic banking system (comprising the Islamic bank and all financial institutions offering the IFB-scheme) expanded rapidly in 1994. Currently, there are more than half a million account-holders holding several accounts within the system¹⁸. During the year, total assets accumulated by the system rose sharply by 117%

¹⁸ As at the end of 1993, the total number of account holders with Bank Islam Malaysia was 476,230 while the remaining 45,857 were account holders with the IFB-scheme institutions. The estimate number of account holders by the end of 1994 was about 600,000.

from a year earlier to RM5.2 billion (£1.3 billion). Meanwhile, the total deposits mobilised and total financing extended by the Islamic banking system amounted to RM4.7 billion (£1.18 billion) and RM1.7 billion (£0.43 billion) respectively. However, most of these were dominated by the established Bank Islam Malaysia, accounting for between 60 and 73% of the total amount of deposits and financing extended.

Considering a country with a Muslim population of about ten million, constituting about 53% of the population, these figures are very small by any standard. This was more revealing when compared to the total amount of deposits of RM232.1 billion (£58.03 billion) mobilised by the conventional banking system during the same period. For example, with the existing facilities of computerised system and branch networks all over the country, there is no reason to believe that it would be in any way inconvenient for the Muslims to switch their existing accounts to the IFB-scheme accounts, especially in cases of investment deposits (which bear the *Shari'ah* forbidden *riba* or *interest* in the conventional scheme). Several reasons, however, could be offered as causal to the unenthusiastic response : firstly, it could be possible that a large percentage of Muslims in the country felt indifferent about the scheme; secondly, there may not have been enough publicity and promotional exercise from the financial institutions themselves (apart from the press conference from the authorities when the scheme was launched); thirdly, since the scheme bears an Islamic-label, it could have been taken for granted that Muslims in the country would necessarily be instantly receptive to such a programme; finally, it could also be possible that the Muslims were yet to be readily convinced of the significant difference between the scheme and the existing services, apart from its label.

The key point to appreciate here is that the exercise of implementing an Islamic banking system does not end merely with the establishment of institutions, outlets, regulations, instruments and services alone. As Wilson (1994) aptly explained, it is probably equally important to understand the perceptions of the potential customers, to

appreciate their different shades of needs, the importance they place on returns to investment, and to identify the products and services that are appealing to them. This requires a carefully planned market research. The Muslim clients should not be taken for granted by the institutions in simply offering services on a "take it or leave it basis". Thus, even if a scheme were to be Islamically-labelled or *Shari'ah-based*, more product marketing, financial innovation and promotional exercises need to be conducted in order to enhance mobilisation of resources and optimise the allocation of funds¹⁹.

Nevertheless, the introduction of the IFB-scheme should be seen as an initial positive step taken by the Government in providing an alternative to the whole population, particularly to the Muslim community in Malaysia. The scheme provides greater access to interest-free banking facilities by the banking public in the financial market. When the scheme was launched, there were already a total of 21 Islamic banking products that have been successfully developed by the Central Bank ranging from the basic overdraft facilities to the *Islamic-export-credit refinancing*. Hence, a broad variety of instruments was already available to the participants of the IFB-scheme.

The final requirement for establishing a full-fledge Islamic banking system was achieved with the launching of the Islamic inter-bank money market in January 1994. This was claimed to be among the first Islamic money market in the world. It covers the inter-bank trading in Islamic financial instruments, Islamic inter-bank investments and Islamic inter-bank cheque clearing system. Thus, Malaysia has emerged as the first country to implement a dual banking system, that is, an Islamic banking system existing in parallel with the conventional system. With the passage of time, more innovative products, wider publicity, aggressive marketing strategies and efficient services, there appears a high potential for the system to increase its number of customers and enhance

¹⁹ See Wilson, Rodney J.(1994).

its ability to mobilise a greater volume of capital resources (from both the Muslims and non-Muslims alike).

3.3.3 Development of the Non-Monetary Institutions

The non-monetary institutions include those financial institutions whose liabilities are generally accepted as "*near-money*". The three main non-monetary institutions within the banking system are the finance companies, merchant banks and discount houses.

After the commercial banks, the finance companies are the second largest deposit-taking institutions. There are currently 40 finance companies (with 860 branches) in the country but 18 of them are operating as subsidiaries of the existing commercial and merchant banks. As seen in table 3.1 earlier, its assets at the end of 1994 was RM73.5 billion (£18.4 billion) or about 16.6% of the total assets in the banking system. A large percentage of these assets (61%) are in the form of fixed deposits. Between the period 1970-1994, its average annual growth rate was about 21%. Financial companies first emerged in the late 1960s to complement the role of commercial banks in providing credit facilities to consumers, house-owners and small businesses. However, prior to the liberalisation of deposit-rates, some of the commercial banks have also set up their own finance company subsidiaries to tap deposits from the market because the latter could offer higher deposit-rates. Over the years, as more financial products and services were being developed and more branch networks being established, the line separating finance companies and commercial banks became increasingly blurred.

On the other hand, the merchant banks were introduced in the 1970s to complement the facilities provided by the commercial banks and finance companies.

They function primarily as specialists in the money and capital markets, offering services such as corporate advisory, syndication of loans, underwriting of new issues of shares and bonds, portfolio management and others. In tandem with the sustained economic growth and active development in the stock market, the merchant banking industry has been recording strong performance for several years. The latest guidelines imposed in 1993, required merchant banks to have at least 30% of their total net income derived from fee-based activities. With a buoyant economy and bullish stock market during the year, the guideline was easily complied with. By the end of 1994, the 12 merchant banks recorded a total asset of RM23.6 billion (£5.9 billion). The industry recorded an average annual growth rate of about 17% between 1980 and 1994.

A much smaller industry within the banking system is the discount houses. They were established to offer services in short-term money market operations. They mobilise funds from other financial intermediaries and large enterprises with sizeable liquid funds in the form of short-term deposits (overnight and call deposits), which are then invested mainly in marketable Government securities. However, with several financial deregulations and increasing competition from the other inter-bank market players, their roles and importance had since diminished. The Central Bank then introduced new reforms in 1991 to allow discount houses to invest in high quality corporate bonds and commercial papers as well as to underwrite issues of private debt securities. At the end of 1994, the 7 discount houses recorded total assets of only RM9.3 billion (£2.3 billion).

3.4 The Non-Bank Financial Intermediaries

The non-bank financial intermediaries are institutions which are supervised by various Government agencies and statutory bodies and may be broadly classified into five sub-groups : (i) the provident and pension funds; (ii) the insurance companies; (iii) the development finance institutions; (iv) the savings institutions; and (v) a plethora of

other credit institutions such as the building societies, the factoring and leasing companies, unit and property trusts and many others. Collectively they serve some specific financial needs which are either not provided by the banking institutions or to complement the latter's role. For example, the National Savings Bank was set up by the Government to fill the gap in mobilising small savings from the rural areas; while the development banks were established to provide long and medium-term financing to specific areas of the economy which are regarded as significant for the development of the country²⁰.

At the end of 1994, these institutions mobilised RM186.5 billion (£46.6 billion), almost 30% of the total assets of the financial system, and between 1960 and 1994 it recorded an average growth rate of about 15.5% per annum.

3.4.1 Development of the Non-Bank Financial Intermediaries

The largest institution within this group is the Employees Provident Fund (EPF), which mobilises contractual savings in the form of provident and pension fund contributions, mainly for investment in the Malaysian Government Securities (MGS). In terms of funds mobilised and invested, it is probably the largest institutional investor in the country with a total fund of RM84.5 billion (£21.1 billion) at the end of 1994. In the early years, the EPF was required by statute to invest at least 70% of its annual and cumulative funds in the MGS. However, with the recent development of the Government's privatisation policy which reduced its domestic borrowing needs, the revised statute has lowered the level to only 50% so as to enable the institution to widen its spectrum of investment portfolios. In addition, it is also allowed to invest up to 15% of its total funds in capital market instruments.

²⁰ See Lin, See Yan (1992).

The remaining group of institutions, including the insurance companies, savings institutions, unit trusts and several others accounted for only about 16.3% of total assets of the financial system. Included in this group are the Government's Unit Trust Agencies (in short, the ASN and ASB)²¹ and the Pilgrims Management and Fund Board. In essence, both these institutions were set up with the objective of mobilising savings of the Bumiputera Muslims for investments in the capital market in order to assist the community to achieve the Government's policy in distribution of corporate equity ownerships²².

Besides the above, there have not been any major structural changes experienced in this sector of the financial system in recent years. The general progress appeared in the form of increment in their total assets, widening of the clientele base, improving in the rendering of services and establishing new products, and changing in the guidelines of their operations so as to be more competitive.

3.5 Financial Deepening and Structural Reforms

Shaw (1973)²³ defined financial deepening as *the accumulation of financial assets at a pace faster than the accumulation of non-financial wealth*. Shaw's argument is that the development of financial markets and institutions is a necessary condition for economic growth, and that developing countries typically suffer from a condition of financial repression which keeps finance *shallow* and restricts economic growth. Financial repression is characterised principally by controls on interest rates (either by

²¹ ASN is the initial for Amanah Saham Nasional (or National Unit Trust) and ASB refers to Amanah Saham Bumiputera (or Bumiputera Unit Trust).

²² We shall discuss this issue in more detail in chapter five.

²³ See also McKinnon (1973) for discussions on these macroeconomic concepts of financial deepening and financial repressions.

the Government or oligopolistic institutions). This leads to suboptimal generation of domestic savings and to a poor matching of saving with the most productive investment. Legislated interest-rate ceilings discourage savings, especially when inflation reduces the real interest rate to negative values²⁴. In such situations, private financial savings tend to be invested in non-financial assets such as gold or land; capital movements are being controlled and the currency's exchange rate over-valued; typically, there is an insufficient development of financial institutions, such as commercial banks, insurance companies, pension funds, and at the same time, money and capital markets are also being restricted. The theory is essentially monetary, that is, it is based on the belief that money supply, its real value and real cost (i.e. real interest rates) have very important roles in economic growth. Its policy implications would lead to the liberalisation of financial markets, particularly the liberalisation of interest rates²⁵.

Records have shown that in the early years after independence, the Malaysian financial system did experience some form of financial repression, albeit not to the extreme of impeding growth. Financial deepening and innovations have proceeded rapidly since then, especially since the second half of the 1970s. Although in the early years, monetary policies were rather cautious and conservative, as the market grew and matured, these positions changed and evolved to adapt to the changing environment. In essence, the system has undergone several structural changes and policy reforms to meet the needs of a rapidly expanding economy and the changing needs of the market place.

In measuring the process of financial deepening and degree of monetisation, economists²⁶ have suggested several methods such as : (i) analysing the relationship between total assets of the financial system and its nominal GNP; or (ii) the flow

²⁴ See Pomfret (1992).

²⁵ See Kitchen (1986).

²⁶ See Shaw (1973), McKinnon (1973), Gupta (1984) and Money and Banking in Malaysia (1994).

concept (sometimes called the income elasticity concept) which measures, the ratio of the average annual growth rates of total assets in the financial system to the nominal GNP; or (iii) comparing the ratio of broad money supply (M2) also to the nominal GNP.

Earlier in table 3.1, notice that the ratio of assets of the financial system to GNP, rose steadily from almost 1.0 in 1970, 1.44 in 1980, 2.99 in 1990 and rising further to 3.56 in 1994. Aside from Singapore, this is a remarkable development when compared to all the remaining ASEAN countries. The income elasticity of financial assets in Malaysia was also one of the highest in ASEAN, recording a ratio of 1.64 during the period 1975 and 1992²⁷. In terms of the M2/GNP ratio, its growth from 0.46 in 1970 to 0.82 in 1992 is comparable to Japan which grew from 0.85 to 1.08 over the same period. This reflects the rapid monetisation, expansion and penetration of the banking system in the country.

A further indication of the growing maturity of the financial system is in the lengthening of maturities of various financial instruments (see table 3.3 below). Indeed, the banking system has since transformed itself from the traditional role of basic trade financing to one that has succeeded in efficient mobilisation of resources and optimal allocation of productive investments, especially in the manufacturing sector.

²⁷ See Viksnins (1980) for an earlier analysis of financial deepening in ASEAN countries.

Table 3.3
Maturity Structure of Deposits And Loans and Advances of the Financial System to the Non-Financial Private Sector in Malaysia

	1970		1980		1992	
	RM Million	%	RM Million	%	RM Million	%
<i>Deposits :</i>						
Up to 1 year ¹	3,480	99.2	23,848	88.5	102,139	84.6
More than 1 year	28	0.8	3,111	11.5	18,559	15.4
	3,508	100.0	26,959	100.0	120,698	100.0
<i>Loans and Advances :</i>						
Up to 1 year ²	2,274	77.7	15,536	53.4	76,484	41.9
More than 1-4 year	168	5.7	4,219	14.5	26,404	14.4
More than 4 years	468	16.6	9,360	32.1	79,798	43.7
	2,928	100.0	29,115	100.0	182,686	100.0

Notes : ¹Include demand deposits, savings deposits and negotiable certificates of deposits.

²Include term loans of up to 1 year, overdrafts, bills financing, revolving credits and other loans.

Source : Money and Banking in Malaysia, (1994).

3.5.1 Liberalisation of the Interest Rates

Although empirical evidence on the effect of interest rates on aggregate savings (as distinct from their pattern) continues to give mixed and inconclusive results²⁸, it is generally agreed that liberalisation of the financial sector does bring about a positive effect in the economy. It will remove the controls and constraints associated with financial repression, thereby encouraging savings, efficient allocation of investments and economic growth. In one study, Galbis (1977) has also shown theoretically, that high real interest rates (in a liberated financial system) are growth-promoting because they improve the quality of investment, even in situation where real savings are not sensitive to the interest rates.

²⁸ See Gupta (1984).

The process of liberalising interest rates in Malaysia has gone through several stages before being fully liberated in February 1991. In the early years, the country adopted a flexible "*administered*" interest rate regime, whereby the Central Bank, in consultation with commercial banks, determined the minimum lending rate and the ceiling on deposit rates. This practice served its purpose well in providing the rapidly growing economy with a relatively stable and orderly interest rate structure²⁹. However, towards the end of 1970s, in tandem with the changing economic scenario, the Central Bank had begun to encourage the development of a market-oriented system of interest rate determination so as to reflect the true cost of funds and reduce any distortions in the market.

Thus in 1978, banks were permitted to determine their own interest rates on deposits and flexible lending rates to their prime customers. However, this measure had caused rates to move in an asymmetrical manner to the disadvantage of the borrowers. To resolve the issue, in 1983, the Central Bank then introduced the Base Lending Rate (BLR) system, whereby the banks were required to peg their lending rates to the BLR. This rate was determined based on the bank's cost of funds, after providing for the costs of statutory reserves, liquid assets requirements and administrative overheads. However, faced with very tight liquidity during the economic recession between 1985 and 1987, the Central Bank intervened again by compelling all financial institutions to set their interest rates (for deposits of up to one year) to the deposit rate of the leading domestic bank (which is Government-owned). Over time and with growth in the economy and maturity in the markets, the banks were finally freed from any interest rate regulation in February 1991. This resulted in increased competition among banks in the country in soliciting deposits and extending loans in search of profits and maintaining market shares.

²⁹ See Lin, See Yan (1993).

3.5.2 Other Regulatory Reforms

Apart from the interest rate deregulation, there were several other institutional and regulatory reforms that took place. Financial innovations and new instruments were introduced in the market. All these were developed continuously with the objective of enhancing the efficiency of the financial system. Measures taken to achieve them were designed usually in the form of stimulating competition and strengthening the role of market forces. In general, these measures fall within the broad range of³⁰ :

(i) widening the scope of competition through deregulation of interest rates (including freeing fees and commissions for financial services, and prohibiting cartel arrangements);

(ii) providing more scope for de-specialisation and diversification by removing obstacles to entry and exit. For example, by liberalising the rules governing the deposit-taking activities of the merchant banks and finance companies, and expanding the number of money-market participants (to include finance companies) to participate in the inter-bank market;

(iii) encouraging the creation of a wider range of new financial assets and debt instruments. For example, the removal of stamp duties for bonds and listings of new debt securities such as the detachable Transferable Subscription Rights (TSR), usually termed warrants, and Convertible Unsecured Loan Stocks (CULS);

(iv) removing obstacles to lending and investment decisions (that is removing lending guidelines and the creation of special funds); for example, removing regulatory restrictions on investments of discount houses;

³⁰ See Money and Banking in Malaysia (1994 : pp. 40-60) and Ahmad (1991).

(v) improving transparency in the availability of financial services;

(vi) realigning the statutory reserve ratio of banking institutions and allowing these institutions to maintain their reserve and liquidity ratios requirements on an average periodic basis (instead of a daily basis);

(vii) streamlining the capital adequacy ratio by using the weighted risk asset approach, and applying the Kuala Lumpur Interbank Offered Rate (KLIBOR which is the equivalent of LIBOR in Britain) as an indicator of inter-bank money market conditions, and many others.

3.6 Savings - Investment Gap

Although the symptoms of financial repression vary from country to country, some common elements recur frequently. Empirical evidence³¹ of many developing countries that experienced financial repression showed that interest rates in the formal financial sector have been held at artificially low rates, thereby discouraging the growth of financial assets (savings). However, low interest rates also encourage the desire to borrow, leading to a gap between the supply of funds (savings) and the demand for funds (investments), often termed as the savings-investment gap. This section attempts to examine the experiences of the Malaysian financial system in managing this gap and its future plan of promoting higher domestic savings as its primary source of funds.

The economic development of a country, to a large extent, depends on its ability to mobilise the necessary savings to finance capital formation in order to enhance its productive capacity. Although the current consensus is that increased savings ratios are

³¹ For example, see Nafziger (1990), Meier (1989), Todaro (1989), Thirlwall (1976) and Fry (1988).

not a sufficient condition for economic growth, investment is still important and probably a necessary condition for economic development³². Indeed growth can only be sustained when economic resources are efficiently mobilised and effectively transformed into productive activities. To this end, there needs to be a constant and steady flow of savings channelled into productive long term investments. This in effect, is among the many important roles of a country's financial system, in particular the financial institutions, acting as intermediaries between the suppliers and users of funds³³. It has been argued that increased degree of financial intermediation will make allocation of resources even more efficient.

In an idealistic situation where the economy is in equilibrium, savings would be equal to investment. However, economies are seldom in equilibrium and in a developing economy, a shortfall usually exists between savings and the desired level of investment. This shortfall is, in fact, equivalent to the difference between export and import earnings, which is normally filled by capital inflows³⁴. Such capital movement is especially visible in a small and open economy like Malaysia, where its fluctuating terms of trade and impact on export earnings (that is, income) have a marked influence on both the rate and level of private and public savings. Consequently, periodic imbalances which were reflected in the form of deficits in its (current account) balance of payments, were financed by foreign capital inflows³⁵.

³² See Pomfret (1992).

³³ See Desai V. (1976).

³⁴ These two gaps are equivalent and can be demonstrated using national income identities :

$$Y = C + I + X - M$$

$$Y = S + C$$

$$\therefore S + C = C + I + X - M$$

$$\text{or } S - I = X - M$$

(where Y = GDP; C = Consumption; I = Investment; X = Exports; M = Imports; S = Savings).

³⁵ See Lin, See Yan (1991). Deficits do not necessarily have to be financed by foreign capital inflows; other options include enhancing efforts to increase savings, borrowing from the private sector or simply reducing imports.

Malaysia has benefited significantly from constant and steady capital inflows in direct foreign investment for many years. Most of these come from several capital-exporting countries such as the United States, Japan, Western Europe and (since the late 1980s), the newly industrialising economies of East Asia such as Taiwan, Hong Kong and South Korea. However, in the wake of current development in world politics and changing economic scenario, there emerges a growing competition in the demand for scarce world capital, coming from emerging economies and countries in Eastern Europe, the former Soviet Union, Vietnam and mainland China. Of late, there have been increasing concerns expressed by the policy-makers in Malaysia, in relation to the perceived dangers of the country's over-dependence on foreign capital to finance her economic growth³⁶.

As mentioned earlier, Malaysia aims to sustain rapid economic growth with equity and price stability in its effort to become an industrialised nation by the year 2020. In order to achieve its economy's objectives, it is imperative for the country to have contingency plans to bridge potential shortages in investment capital in the uncertain future. Indeed, the process of financial deepening and innovations conducted over the past several decades has contributed significantly towards harnessing capital resources. Throughout many years, there have been effective mobilisation of savings and optimal allocation of funds in productive investments. However, as is often the case, the funds raised were never sufficient to meet the economy's needs and the situation seemed to have worsened, especially in the early 1980s.

As can be seen from table 3.4 below, historically, Malaysia has managed to sustain a relatively high level of savings. The country has managed to save an average of about 27% of GNP a year for the past twenty-nine years (1966-1994), a level which is amongst the highest in the world³⁷. During the last four years (1991-1994), the ratio was

³⁶ See section 2.4 of Chapter 2 for further details.

even higher at 32.4% of GNP. Apart from the effect of global recession faced during the 1981-1985 period, the rate of savings had increased steadily from 18.2% of GNP during the First Malaysia-Plan (1966-1970) to an estimated 34% of GNP in 1994; this ratio is also expected to remain for the current year (1995)³⁸.

Table 3.4
Malaysia's Savings-Investment Gap between 1961 and 1994
(in % of GNP)

Year (Period)	1966-70 (1 MP)¹	1971-75 (2 MP)	1976-80 (3 MP)	1981-85 (4 MP)	1986-90 (5MP)	1991-94 (6MP)²
Public Gross Domestic Capital Formation	6.6	8.0	10.4	17.3	11.2	12.9
Public Savings ³	1.1	2.5	7.7	11.7	9.4	14.1
Deficit/Surplus	-5.5	-5.5	-2.7	-5.6	-1.7	-1.2
Private Gross Domestic Capital Formation	9.9	16.9	17.7	18.9	18.1	25.1
Private Savings	17.1	18.6	22.6	15.8	21.3	18.3
Deficit/Surplus	7.2	1.7	4.9	-3.1	3.1	-6.8
Gross Domestic Capital Formation	16.5	24.9	28.1	36.2	29.4	38.0
Gross National Savings	18.2	21.1	30.3	27.4	30.8	32.4
Balance on Current A/C	1.7	-3.8	2.2	-8.8	1.4	-5.6

Notes : ¹MP : 5-Year Malaysia Plan.

²Preliminary figures.

³Public sector current surplus.

Source : Bank Negara Malaysia, Annual Reports (various issues).

Due to the high level of savings, the economy had essentially neither a savings-investment gap nor a foreign exchange gap to bridge, for the entire period of 1966-1980. Although there had been episodes in the intervening years where gaps occurred (due to cyclical poor international demand for the country's commodity exports), the substantial accumulation of external reserves during the period has helped to overcome the

³⁷ See International Financial Statistics, IMF (1990).

³⁸ See Bank Negara Malaysia, Annual Report (1994).

shortages. Thus, although the level of gross domestic capital formation had increased rapidly from 16.5% of GNP (between 1966 and 1970) to 28.1% of GNP (between 1976 and 1980), the economy managed to harness sufficient domestic savings over the period to finance investment without resorting to serious external financing³⁹.

However, due to the global recession in the early 1980s, the situation turned for the worse. The average balance of payment deficits for the period 1981-1985 was 8.8% of GNP, reaching as high as 14% of GNP in 1982. Consequently, as explained in the previous chapter, the fiscal and external balances deteriorated and the economy had to be financed from large external borrowings. This led to external debt rising significantly to RM42.5 billion (£10.63 billion) or 59% of GNP by the end of 1985.

Recognising the problem, the Government then conducted several structural adjustment programmes during the Fifth Malaysia-Plan (1986-1990), downsizing its role and eventually reducing public investment to only 11.2% of GNP. By the end of the period, with continued fiscal restraint in the face of improving commodity prices, the current account balance of payment improved to register a surplus of 1.4% of GNP. However, the next period saw a rapid rise in investment activities resulting in the re-emergence of a savings-investment gap throughout 1991-94. The deficit in the current account is expected to remain high over the next few years due to the sharp rise in private consumption, and large capital investments on account of sustained buoyant economic performance. The forecast for the current account in 1995 is another staggering deficit of RM14 billion (£3.5 billion) or almost 7% of GNP.

However, in a study on savings, investment and current account imbalances in Malaysia, Fry (1993a) suggested that no policy changes should be taken. He was of the

³⁹ See Lin, See Yan (1993).

opinion that, since the volatile current accounts experienced in the country have not impeded rapid economic growth, the situation does not require any policy action. According to his study, only when sustained current account deficits produce a build-up of foreign debt in excess of 50% of the GNP, need active macroeconomic policy be used to reduce the imbalances. Malaysia has yet to reach such a critical stage. In fact, the gap during this period was financed by direct foreign investments in the form of equities rather than direct external borrowings (loans). As a result, this has led to a significant improvement in the economy's external debt position; albeit, with the cost of a more unstable mode of foreign equity financing.

Despite several Government's efforts to increase both public and private sectors savings, the volume of funds mobilised has not been sufficient enough to meet the economy's financing needs. Consequently, the need is to turn, increasingly, to foreign capital to finance the resultant shortfall. Foreign funds could be harnessed through several means, such as external borrowings, direct foreign investment (DFI) or portfolio investment. Under DFI, the foreign investor retains a significant ownership stake and receives rewards in the form of performance-related profits, while with portfolio investments, the capital is provided in return for a contractual obligation to repay the loan at fixed terms.

Since the mid-1980s, the strategy has been to promote aggressively the inflow of funds through direct foreign investments rather than external debt. The argument in favour of DFI is basically economic. Firstly, this will reduce the more costly future streams of debt servicing. Secondly, the foreign firm is supplying capital, together with an associated package of technical, managerial and marketing knowledge, at a lower cost than any domestic firm could afford to offer. The foreign firms also benefit because

using its resources in Malaysia is more profitable than their own country; thus there exist a mutual advantage⁴⁰.

Initially, the arrangement fell into place and served the economy's expansion well, especially in the issue of "investor's recourse" to domestic savings. For example, most of the foreign firms set up in the country, are generally well-established companies and tend to depend on their own internally-generated equity-financing or retained earnings to finance their future investments. On the other hand, the local firms would tend to resort to domestic borrowings through the banking system or the capital market to raise funds. However, of late, there seems to emerge a rising competition for domestic funds in the financial markets, between the foreign and local firms, resulting in a further widening of the savings-investment gap⁴¹. This could possibly be due to some policy changes (that allow an increased debt ratio for the foreign firms) in order to promote rapid expansion or an economic slowdown in the parent countries of these firms. Thus it is important for the policy-makers to identify whether this gap is a consequence of insufficient domestic savings, or reduced inflows of foreign capital, or both⁴².

3.6.1 Sources of Capital Funds

Under the Sixth Malaysia Plan (1991-1995), the policy for bridging the savings-investment gap is to raise gross national savings to 36% of GNP by the end of the term. Considering the savings ratio in 1994 was 34% of GNP, and the estimated rate of growth in savings for 1995 being 14.7%, the ratio of 36% of GNP should be attainable.

⁴⁰ Pomfret (1992) argued that this mutual advantage would be assured if all markets worked perfectly competitively; however, in reality the markets in which these foreign firms operate are rarely so.

⁴¹ See Bank Negara New Private Investment Survey (1991); and Lin, See Yan (1993).

⁴² The analysis is beyond the scope of this study. We shall also confine our discussion on the sources rather than the uses of capital funds because analysis of the latter is more relevant elsewhere.

In general, the three main sources of capital funds in an economy are the public sector savings, the private sector savings and the inflow (or outflow) of funds from abroad. In most cases, the public sector has always been the net user of funds, and by far the most important source of capital in all countries is domestic savings. In Malaysia, the major contributor of public savings since 1981, has been the non-financial public enterprises (NFPEs) such as the nationalised petroleum company (PETRONAS). The contribution of these enterprises increased significantly after 1980 following the establishment of a number of large NFPEs to spearhead the modernisation programmes and industrial development of the country, especially in the heavy industries⁴³. Besides, the increase was also due to simultaneous structural changes in the Government policies to exercise restraints in operating expenditures by reducing the size of the public sector.

Table 3.5
Malaysia : Sources of Capital Funds between 1988 and 1994
(in RM Billion)¹

Year	1988-92	1990	1991	1992	1993	1994
Private Sector Savings	107.1 (51.2)	21.5 (52.2)	20.4 (44.3)	28.7 (44.6)	29.0 (33.4)	32.2 (55.0)
Public Sector Savings	62.6 (30.0)	12.6 (30.6)	14.0 (30.3)	16.5 (25.6)	20.6 (23.8)	27.6 (47.2)
Net Inflow of Funds from Abroad	39.3 (18.8)	7.1 (17.2)	11.7 (25.4)	19.2 (29.8)	37.1 (42.8)	-1.3 (-2.2)
Total Flow of Funds	209.0 (100.0)	41.2 (100.0)	46.1 (100.0)	64.4 (100.0)	86.7 (100.0)	58.5 (100.0)

Note : ¹Figures in parenthesis refer to the respective percentages.

Source : Bank Negara Malaysia, Annual Reports (various issues).

Table 3.5 above shows the sources of capital funds between the years 1988 and 1994. Notice that during the period 1988-1992, at the height of Malaysia's economic

⁴³ See Herbert (1993).

boom, the net inflow of funds from abroad recorded a total of RM39.3 billion (£9.8 billion) or 18.8% of the total flow of funds of RM209 billion (£52.3 billion). The year 1993 witnessed a much higher level of financial intermediation activity between investors and savers; the flow of funds expanded further by 41.4% to register a total of RM86.7 billion (£21.7 billion). Although in the past, private sector savings used to be the single most important source of funds in the country, in 1993 it accounted for only one-third of total capital funds. Its place was taken by the net inflow of funds from abroad which increased to a new high of RM37.1 billion (£9.3 billion), or 42.8% of the total capital. However, most of these funds were in the form of short-term capital inflows (or short-term speculative capital rather than long-term funds) attributable to the favourable domestic interest rates, buoyant stock market and expectations of an appreciation in the Malaysian currency exchange rate⁴⁴.

The speculative position of these funds was clearly reflected in 1994 when the situation reversed⁴⁵. Foreign capital flows recorded a net outflow of RM1.3 billion (£0.33 billion) or negative 2.2% of the total funds. Nevertheless, both the private and public sector savings increased significantly to fill the gap and managed to harness 55% and 47.2% of the total sources of capital in the financial system respectively⁴⁶. In the light of such uncertainties in the flow of foreign funds, it is imperative to enhance efforts to increase domestic savings to finance economic growth.

⁴⁴ See Bank Negara Annual Report 1993.

⁴⁵ Nevertheless, the claim is debatable because the reverse in the direction of capital flows could also be due to equally, if not more, favourable changing situations in the funds' home countries.

⁴⁶ See Bank Negara Annual Report 1994.

3.6.2 Determinants of Private Savings

Basically, there are two forms of private savings : compulsory savings and voluntary savings. Compulsory savings in Malaysia is determined by statute and is therefore, entirely dependent on changes in nominal income levels and coverage of employees under the Employees Provident Fund scheme. In the case of voluntary savings, savings by households, individuals and the Government, they are generally dependent on the ability to save, willingness to save and opportunity to save. Theoretically, the ability to save is determined by income, the population dependency rate and wealth, while the willingness to save is subject to the interest rate level and age-group (or the stage of career-life an individual is in). The latter is based on the observation that savings is highest at the mid-career stage. The opportunity to save would depend on the availability of financial intermediation vis-à-vis the opportunity cost of personal investments⁴⁷.

Voluntary savings in Malaysia is largely effected through the banking institutions, and the commercial banks alone accounted for almost 68% of total savings at the end of 1992. Several studies have been conducted to establish what the determinants of savings in Malaysia are. Some have been inconclusive due to either incomplete or ambiguous data. For instance, it is often difficult to get a complete picture of the net savings of households and business enterprises in the entire financial system. Nevertheless, in his study, Ahmad (1993) attempted to examine the factors determining savings by households and businesses in the banking system for the sample period between 1982 and 1992. The results of his regression analysis showed that growth in the private sector deposits in commercial banks enjoyed a correlation of 0.70 with growth in deposits by business enterprises, and a correlation of 0.77 with growth in deposits of

⁴⁷ See Ahmad (1993) and Smith (1989).

households in commercial banks. This implies that there was a close relationship between the deposits by the private sector, business enterprises and the households, collectively.

In addition, Ahmad's findings were in agreement with another study by Fry (1992) which showed that, growth in private savings (deposits) in the banking system in Malaysia, appeared to be positively correlated to interest rates and the GNP growth. The correlation coefficient with per capita GNP was 0.83. However, we need to be cautious in interpreting the relationship with interest rates. This is because the result could have also reflected the influence of savings made by foreigners due to interest rate differentials in Malaysia's favour, during the sample period. Nevertheless, the interest rate as a factor influencing savings was very significant in Ahmad's sample data. It indicated that a 1% change in interest rates could lead to 2.49% increase in commercial banks deposits from the private sector. It would have been more interesting to attempt to determine the factors influencing savings among the Bumiputera Muslims. Considering the insignificant deposits made through the interest-free banking system, it remains uncertain as to whether it was the *rate of return on savings*, or the *quality of banking services* that the community regarded as a more important criteria in their choice of savings institutions⁴⁸. Understanding these issues would enable us to explore means of enhancing deposits of their limited financial resources for investment purposes, particularly in the capital market.

With regard to the causal link between savings and growth, the issue has always been ambiguous, both in theory and practice⁴⁹. For example, questions have often been raised as to whether high growth rates lead to high savings or vice versa; whether savings is more related to relative income or wealth; and whether high savings (as

⁴⁸ We shall return to these issues when discussing the survey analysis in later chapters.

⁴⁹ See Datta (1993) and Deaton (1989).

experienced in Malaysia) was a consequence of rising income, the Government intervention or a lag in spending⁵⁰. Nevertheless, in his study, Fry (1992) found that the national savings rate in Malaysia would increase even without the Government intervention. Other studies have noted that the lowering of population dependency ratio could also increase the absolute savings level. However, of more significant is the need to maintain macro-economic stability that would encourage savings through its effects on investment efficiency and economic growth. These are among the factors that warrant close attention from the policy-makers in their future plans of promoting higher domestic (private) savings as its primary source of funds.

3.7 Summary

The objective of this chapter was to examine experiences of growth, development and financial reform in the Malaysian financial system which have taken place (in tandem with growth and structural changes in the economy) since independence in 1957. The aim of examining these experiences was to enable us to relate and analyse the extent to which the Bumiputera Muslims community has been able to capitalise on the economic opportunities created through such developments. As we shall see in the following chapter, based on the funds mobilised through the financial system relative to the needs of the private sector for investment purposes, there was considerable scope for the community to enhance their financial position and equity ownership of companies in the private sector. The facts and figures in this chapter provide a relevant background for later discussion. They form a basis for us to appraise the potential and prospect of increasing the Bumiputera Muslims participation in the capital market.

⁵⁰ These issues are beyond the scope of this study but would be very relevant for future research, especially in identifying the differences or similarities of determinants in savings and investment.

The chapter began by providing a broad overview of the system, focusing on its parallel development, structural transformation and several monetary policy changes that have brought about considerable financial liberalisation, financial deepening and innovations within the wide spectrum of institutions the system covers. Empirical evidence was also provided to illustrate the process of financial deepening and its stages of development, especially in the rapid growth of its assets and institutional structure.

The Malaysian financial system is basically made up of three broad categories, namely, the banking system, the non-bank financial intermediaries and the financial markets. Apart from the capital market, the development of each of these categories was examined in accordance with their respective roles and importance. Special attention was given to the banking system which made up about 70% of the total assets of the financial system. The experiences in developing a full-fledge Islamic banking system (claimed to be the first of its kind in the world), was also discussed. Although the achievements of the Islamic banking system in mobilising deposits and channelling funds have been promising, the figures recorded at the end of 1994 were still considered very small relative to the size of the Muslim population of the country. Perhaps greater marketing efforts, more appealing and innovative products, and wider publicity could bring about a more enthusiastic response to the Islamic interest-free banking scheme (the IFB-scheme). Nevertheless, the issue of identifying the determinants of (private) household savings especially among the Bumiputera Muslims remains unclear.

Next, the chapter examined the process of financial deepening and structural reform in the country. Other similar experiences on the effect of financial repression in less developed countries were also included to lend support to the positive changes that have taken place in Malaysia. In charting the programmes for reform, it was apparent that the authorities must have considered the prescriptions of both the *financial structuralist* and *financial repressionist* schools of thought.

Finally, the chapter explored the Malaysian experience in managing its savings-investment gap in the economy, as well as its future plan in promoting higher domestic savings as its primary source of funds. Although the current consensus is that increased savings ratios are not a sufficient condition for economic growth, investment is still important and probably, a necessary condition for economic development. For many years, Malaysia has benefited significantly from constant and steady capital inflows in the form of direct foreign investments. However, the situation is changing rapidly due to increasing competition for scarce capital in the world. Consequently, there is an increasing uncertainty over the economy's ability to sustain the privilege of receiving sizeable foreign investments in the future. The contingency plan is to increase gross national savings to about 36% of the GNP in the years to come. Based on the existing economic indicators, this should be attainable. Further, the Government is also optimistic in its ability to maintain the prevailing macro-economic stability, as well as to manage its large deficits in the current account balance of payments (which is expected to reach about 7% of its GNP by the end of 1995).

The next chapter will examine the development of the Malaysian capital markets, focusing on the growth and increase in depth of the Kuala Lumpur Stock Exchange from an insignificant entity to become the largest exchange in South-East Asia. This will be followed by an analysis of the Bumiputera Muslims participation in the Malaysian capital markets in chapter five.

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CHAPTER 4

CAPITAL MARKET DEVELOPMENT IN MALAYSIA : AN APPRAISAL OF THE KUALA LUMPUR STOCK EXCHANGE

4.1 Introduction

In the previous two chapters, we examined the growth and development of the Malaysian economy as well as the structural changes and policy reforms that have taken place in its financial system. There were several illustrations that highlighted the country's economic progress, amidst the numerous issues and challenges it faced to achieve a developed nation status by the year 2020. To a large extent, the achievement of sustaining high growth with price stability within a relatively short span of less than four decades, has been attributed to several factors, viz. : the conduct of sound macroeconomic policies and strategies, the industrialisation and modernisation of the economy, the adoption of a market-oriented economic system as well as pragmatic financial policies¹.

Nevertheless, there was also a growing concern and uncertainty in the ability of the economy to sustain its growth and more importantly, to maintain the receipt of significant amount of foreign capital investments, required to finance its future economic development. In the face of new competition for scarce investment funds by the newly emerging market economies in Asia and Eastern Europe, there is a need for the country to promote domestic investment to insulate the economy against the vagaries of the world capital flows.

¹ See Alowi, et. al. (1993)

As the Government continues to reduce its role in the market to promote the private sector to take the lead in future economic expansion, the role of the financial system (especially the banking system and the capital market), in mobilising sufficient funds to meet the investment needs, will become more crucial. Apart from the private sector, the Government is also currently seeking massive funding from the financial market to finance its privatisation programmes. This includes undertaking large scale infrastructure projects costing billions of dollars over the next decade². Indeed, the capital market does not only provide investors and corporations with a wide range of financial instruments at varying risk, it also plays a significant role in the disintermediation³ of medium and long-term funds, essential for productive investments with long gestation periods. In this regard, Malaysia has always recognised the need to develop an efficient and modern capital market to complement the role of the banking sector, both as a source of funding as well as a financial intermediary. In addition, the capital market (especially the equity market) has also been regarded by the Government as one of the important means in realising its policy of equitable distribution of corporate wealth among the various ethnic communities.

In the early 1970s, when the *New Economic Policy* (NEP) was introduced, there were only about 150 Malaysian-incorporated companies listed on the *Kuala Lumpur Stock Exchange* (KLSE), mobilising a mere RM76 million (£19 million). In 1980, the volume of funds mobilised by the capital market (including the issuance of Government securities) was RM2.5 billion (£0.63 billion); by the end of 1994, the size of funds raised had increased to RM17 billion (£4.25 billion) involving a total volume of equity transaction worth RM328.1 billion (£82.03 billion)⁴. In terms of market capitalisation,

² For example, the new Kuala Lumpur international airport alone will require funding in excess of RM10 billion (£2.5 billion), while the massive Bakun hydro-power plant involves a minimum of RM15 billion (£3.75 billion), both to be completed before the year 2000.

³ *Disintermediation* occurs when borrowers and lenders come into contact with each other rather than via financial intermediaries such as the banking system. Eliminating such intermediaries has become feasible because many issuers of debt have better credit ratings than the banks themselves.

⁴ See *Investing in the Stock Market in Malaysia* (1995).

the KLSE has grown from RM13.3 billion (£3.3 billion) in 1973 to RM43.1 billion (£10.8 billion) in 1980, rising to RM509 billion (£127.3 billion) at end of 1994, almost three times the size of the country's GNP⁵. In terms of size, this has made the bourse the largest in South-East Asia and one of the most active trading exchanges in the region. Indeed, the prospects of the capital market in promoting the creation of wealth and investment capital are certainly promising.

Nevertheless, despite such a significant development in the economy and the capital market, it remains quite perplexing to understand the inability of the Bumiputeras to achieve the NEP's target of acquiring 30% of total equity in the corporate sector⁶. At the end of 1992, after thirty-two years of efforts and measures by the policy-makers, the Bumiputera's share of corporate equity in the country was only about 18.2% (increasing from 2.4% in 1970), compared with other Malaysian residents who managed to acquire more than 49.4% (from 34.3% in 1970)⁷ of total corporate wealth. Although there have been some achievements by the Bumiputera in terms of equity-holdings of public-listed companies on the KLSE, the situation was far from satisfactory⁸.

⁵ These figures are small in comparison to the developed capital markets such as London, New York and Tokyo. For instance, the market capitalisation of the 'City' in 1994 was more than £2750 billion, almost twenty-two times that of the KLSE. Nevertheless, by the standard of developing countries, the latter's size is still relatively large.

⁶ As mentioned in an earlier chapter, the aim of the policy is basically to eradicate poverty (largely experienced by the Bumiputeras) and to restructure society to eliminate the identification of race with business or economic function (especially associated with the Chinese). Although the NEP's term has already expired at year end-1990, the target is still being pursued under a new National Development Policy.

⁷ The balance was being held by foreigners, declining in proportion from 63.4% in 1970 to 32.4% in 1992. Source : Jomo (1989) and Mid-term Review of Sixth Malaysia Plan (1993). The latest report in January 1995 indicated an increase of Bumiputera corporate equity from 18.2% to 20.3%. (Source : The Sunday Times, Singapore - 29/1/95).

⁸ For example, as at end of 1994, Bumiputera shareholders made up only 17.3% of total shareholders in the stock market, holding 31.8% of total equity of public listed companies on the KLSE. Note that the NEP's target of 30% equity-ownership refers to the total equity of the whole corporate sector at nominal value and not only those of public listed companies. As mentioned, currently this stands at 20.3%.

This chapter aims to examine the development of the three main segments of the capital market, namely : the Government securities market, the corporate bond market, and the equity market. This will enable us to gauge the role and potentials of these markets in facilitating the achievement of the NEP's target by the Bumiputera community. In addition, the chapter also attempts to describe and analyse the nature and characteristics of the equity market of the KLSE. An understanding of the Exchange's broad operation (such as its trading mechanism, listing requirements, disclosure rules, characteristics of companies and other regulations), would complement our future discussion on the legitimacy of share trading from an Islamic perspective. It seems that some conservative Muslim scholars have regarded share trading (especially in cases involving short-selling and contra-trading) as a form of gambling and have thus, considered it as Islamically illegitimate⁹. Although the issue will be discussed in a separate chapter, it is relevant at this stage to explore its probable relationship to having an insignificant number of Bumiputera Muslims investing in the stock market.

This chapter comprises eight sections. Section two provides a general overview of the Malaysian capital market, looking at its progress and development in terms of size, efficiency and changing structure of funds raised. We also examine the overall gearing ratios of the private sector as a proxy to estimate the capital structure of the public-listed companies. This is followed by sections three and four which explored the Malaysian Government Securities (MGS) market and the Private Debt Securities (PDS) market, respectively. It is interesting to note that in recent years, there have been numerous issues of Islamic-based investment instruments, introduced by both the Government and the private sector. Among others, these include the interest-free Government investment certificate, the *Al-Mudharabah* bonds and the Islamic notes.

⁹ This notion has brought about widespread discussion and debate in recent years, nevertheless, the issue remains inconclusive. Even if the claim on the illegitimacy of speculative trading is valid, some argue that it is often difficult, if not impossible, to prove one's intention in share trading, i.e. the investor could simply be a short-term investor or a hedger if not an arbitrageur. We shall examine some of these arguments in more detail in chapter six.

Accordingly, section five analyses the responses from the corporate sector and the impact these instruments have on the financial system. Next, while section six provides an overview of the equity market, section seven examines closely the trends, characteristics and development of the KLSE as a secondary market. Finally, section eight summarises and concludes the chapter.

4.2 An Overview of the Malaysian Capital Market

In consonant with the strong economic fundamentals of recent years, the Malaysian capital market has accordingly undergone profound development in many areas, growing from an insignificant part of the financial system to one of the leading markets in the Asia Pacific region. As the volume of transactions increased over the years, the secondary market has become increasingly *resilient*, further enhancing its *depth* and *breadth*¹⁰. A broad and deep market, operating in a stable and efficient environment, usually attracts institutional investors¹¹. As the nations of East Asia continue to prosper, private capital flows to the region are expected to continue. The emerging markets currently represent 1% of international institutional portfolios whilst accounting for 6% of global stock market capitalisation. More than half of this money is in the form of foreign direct investment. In 1994, Malaysia was ranked sixth out of nine countries that receive 80% of the world private capital flows¹². However, as we have seen in the previous chapter, these funds have often been volatile, in response to the structural and cyclical changes in the global economies.

¹⁰ A market is said to be *resilient* if the flow of buy and sell orders does not dry up whenever the price changes. On the other hand, a market for a particular security is said to have *depth* if it has a continuous flow of transactions at prices above and below the equilibrium price; and have *breadth* if it has a substantial volume of both buy and sell orders at the equilibrium price. (See Blake : 1990).

¹¹ This is because the market is considered more liquid than those that are *thin* and *shallow*, and the bid-offer spread is also small, hence lowering any inherent transaction or liquidity risk.

¹² A recorded presentation by Dr. Paul S. Armington, the World Bank international economics adviser in Kuala Lumpur on 7th October 1994. Private capital flows to middle-income developing countries had grown eight fold in four years to well over RM520 billion (£130 billion) in 1993.

The Malaysian capital market refers to the medium and long-term financial markets, comprising all public and private debt securities (with maturities exceeding one year), corporate stocks and shares and commodity futures. Basically, the capital market in Malaysia is made up of three main segments : the stock/equity market, the Government securities/bond market and the private debt securities market. The latter is relatively new compared to the more established stock and Government securities markets. Currently, tradings of these instruments are facilitated by the existence of three Exchanges¹³, a principal dealer for Malaysian Government securities (MGS), several unit trust funds, a credit rating agency (which rates the private debt securities) and, in the course of this year, the Kuala Lumpur Options and Financial Futures Exchange (KLOFFE). In terms of access to the market, new issues of Government and corporate securities are offered directly to investors in the primary market, either through a tender process, subscription or private placement basis. On the other hand, secondary transactions in Government and unlisted private debt securities are conducted mainly through the money market, while secondary trading of all listed stocks and shares are carried out almost entirely on the KLSE¹⁴.

The Malaysian capital market was practically non-existence until the early 1960s, with the major portion of the business confined to the subscription of MGS. The growth of the equity market was gradual, in line with the size of the economy and the stages of development. In the early years, most of the financing of economic activities was provided by the banking system. In consonant with the economic growth of the country in the 1980s, the capital market expanded rapidly, mainly to serve the financing

¹³ These are the Kuala Lumpur Stock Exchange (KLSE), the Bumiputera Stock Exchange (BSE) and the Kuala Lumpur Commodity Exchange (KLCE).

¹⁴ Although the KLSE is the only official market for trading in securities, the BSE was set up by the Government in 1969 to promote greater participation of the Bumiputera community in the commercial activities of the country. The Exchange only lists public limited companies owned by Bumiputera and is under the purview of a special Act, separate from the Securities Industry Act of 1983. At present there are only six companies listed on the BSE and trading is generally inactive. We shall return to this issue in the next chapter. For further discussion, see Money and Banking in Malaysia (1994 : Chapter 16).

needs of public sector investment. During this period, about 75% of new funds raised came from the issuance of MGS. Over the years, and as a result of the privatisation policy, deliberate reforms and consolidation efforts, the Government and corporate securities markets developed significantly with a considerable level of sophistication, liquidity and maturity.

Several regulatory and institutional reforms were conducted to liberalise the market, a new legal and administrative framework was developed, and fiscal incentives and innovative instruments were introduced in order to broaden and deepen the market. These measures brought several significant results especially in enhancing the size and efficiency of the capital market. Apart from complementing the banking system in financing economic development, it also assisted the latter in securitising their assets¹⁵. The process of mobilising funds is further enhanced with the presence of a wide range of financial instruments in the market. These include instruments such as mortgage bonds, savings bonds, transferable subscription rights or warrants, several types of loan stocks, redeemable preference shares, share options, commercial papers, and lately, the Islamic investment certificates and Islamic bonds (based on the profit and loss sharing concept of *Al-Mudharabah*¹⁶). While the corporate and Government securities markets tend to improve further, financial development efforts over the next few years are expected to focus on the new emerging private debt securities (PDS) and the derivatives market of options and futures.

¹⁵ *Securitisation* is the process whereby companies or banks, for instance, package existing debts which they have on their balance sheets as marketable financial instruments and sell them to a subsidiary or a third party. By removing them from the balance sheet in this way, the bank frees itself to undertake further lending.

¹⁶ *Al-Mudharabah* (commenda partnership between capital owner and entrepreneur) is one of the principal modes of Islamic financing which does not involve interest or *riba'*, an element forbidden by the Islamic *Shari'ah*. The others include *Al-Musyarakah* (joint-venture in equity and profit-sharing), *Al-Murabahah* (cost plus mark-up sale or deferred financing as in Islamic banking); *Al-Bai' Bithaman Ajil* (also known as *Bai' Mu'ajjal* meaning deferred payment sale), *Al-Ijara* (or leasing), etc. However, these concepts are beyond the scope of our discussion here.

As the market grew in sophistication and complexity, and with the emergence of new innovative instruments, it becomes necessary to have an effective method of monitoring and supervising in order to protect the interest of both investors and savers. One of the most significant development in regulatory reforms in the capital market was the establishment of a single regulatory body known as the *Securities Commission* (SC) in March 1993. Prior to this set up, the regulation and supervision of the capital market rested with at least six different and overlapping regulatory bodies, resulting in the fragmentation of responsibilities and administrative inefficiencies. The outdated arrangement has not only made it difficult for the Government to plan and develop the market, it has also confounded investors in raising funds for their investments.

The establishment of the SC effectively created two key regulatory agencies in the financial system : the Central Bank supervising and regulating the money market and broad banking system, and the SC overseeing the capital market. The latter's responsibility encompasses the regulation and development of the securities industry, financial futures and options markets, unit trust and property trust schemes, and the take-over and merger of companies. Recognising the infancy stage of the capital market, the SC faces a challenging role in striking the right balance between "ensuring the prevalence of an orderly and efficient market" and "the extreme of over-regulating the market" to the extent of stifling its future development. The notion is that markets operate optimally when regulations are at their minimum. Nevertheless, the SC has been determined to instil a fair-play and create a full-disclosure market environment.

In its effort to increase market transparency and to protect investors, the SC has recently introduced a new regulation that requires major shareholders of companies seeking floatation or *reverse take-over/backdoor listing*¹⁷, the option of being governed

¹⁷ Reverse take-over/backdoor listing refers to a situation where an unlisted private corporation acquires a listed public company with the objective of getting stock exchange quotation or to acquire quoted shares without having to go public.



either by "a moratorium condition" on the sale of securities, or a "new profit guarantee requirement" as an assurance of achievable forecast. The "moratorium condition" prohibits the sale of major shareholding for three years to ensure that these shareholders do not cash out immediately after the companies are listed. On the other hand, the "profit guarantee requirement" focuses on the ability of the companies to achieve their forecast profits. For instance, in the case of a floatation, the major shareholders and promoters of the companies must provide a profit guarantee of up to 90% of the forecast profit as stated in the companies prospectus, including its projected maintainable earnings over the next two financial years. The profit guarantee can be in the form of a bank guarantee or placement of shares with an independent third party. The ruling was to ensure that share vendors would be more responsible and careful when disclosing companies' forecasts to the public, thereby, helping to create a more transparent and fundamentally-oriented market. In turn, the potential investors would be more informed, while fund managers would be able to provide better advice on investments.

Meanwhile, the KLSE has been continuously improving its trading regulation to increase *market efficiency*¹⁸ and transparency in its effort to become a world class stock exchange by the year 2020. The plan is to develop an efficient information dissemination system with lower information costs and easier public access. The KLSE is currently operating a fully automated trading system, and a scripless securities clearing and settlement system. The automated trading system was designed to overcome the inefficiencies of an open outcry method in matching and executing orders; on the other hand, the scripless trading technique was to do away with the physical transfer of scrips among brokers and investors.

¹⁸ A market is said to be *informationally efficient* if the current market prices instantaneously and fully reflect all relevant available information made known to the public. *Information efficiency* needs to be distinguished from *allocative efficiency* and *operational efficiency* which will be discussed later. See Fabozzi and Modigliani (1992), Foley (1991) and Blake (1990).

4.2.1 Changing Structure of Funds Raised in the Capital Market

The securities in the capital market are held by a wide range of individuals and institutional investors with the latter maintaining a substantial proportion in both stocks and private debt securities. In addition, the Government securities are held almost entirely by institutions, including the provident, pension and trust funds, which in most cases, are required by statute to hold a minimum proportion of their investments in such securities¹⁹.

Funds raised in the capital market have increased steadily, at an average annual growth rate of about 16% over the past three decades (1962-1992). Growth moderated in 1993, but expanded significantly in 1994, growing by about 23% between the two years. This reflected rising income levels and savings, as well as the growing demand for medium and long-term funds by the Government and the corporate sector. Total new funds mobilised rose from less than RM140 million (£35 million) in 1961 to RM405 million (£101.3 million) in 1970, RM2.5 billion in 1980 (£0.63 billion), RM 14.7 billion (£3.68 billion) in 1990, reaching RM17 billion (£4.25 billion) by the end of 1994. (See table 4.1). In 1992, net funds raised in the capital market exceeded (for the first time) the net new loans of RM13.7 billion (£3.4 billion) extended by the banking system. However, the average annual amount of RM8.6 billion (£2.15 billion) raised in the capital market between 1981 and 1994 was still lower than the average RM12.1 billion (£3.03 billion) of new credits extended by the banking system over the same period. This implies that domestic borrowings from the banking sector has remained significant.

In table 4.1 below, notice the changing structure of funds mobilised in the capital market between 1970 and 1990, and the prominent role played by the equity market in raising funds for the corporate sector in the early 1990s. Prior to 1989, the Government

¹⁹ Money and Banking in Malaysia (1994 : Ch. 16).

Table 4.1
Funds Raised in the Capital Market of Malaysia between 1970 and 1994
(in RM Million)

	1970	1980	1985	1989	1990	1991	1992	1993	1994
By Public Sector :									
Government securities ¹	329	2311	3591	2459	3916	3157	1380	-625	-1049
Investment certificates	-	-	-	-	-100	-	100	1000	2800
Malaysia Savings Bond	-	-	-	-	-	-	-	855	-70
Net Funds Raised	329	2311	3591	2459	3816	3157	1480	1230	1681
By Private Sector :									
Shares ²	76	137	645	2508	8649	4392	9181	3245	8159
(of which)									
<i>Public issues</i>	15	2	237	1316	3757	1743	5416	1442	3067
<i>Rights issues</i>	43	103	358	1145	4419	2158	3438	1177	3480
<i>Others</i> ³	18	32	50	47	473	491	327	626	1612
Debt Securities ⁴	-	20	-	1903	2278	1841	3121	1975	7160
Net Funds Raised	76	157	645	4411	10927	6233	12302	5220	15319
Total Net Funds Raised	405	2468	4236	6870	14743	9390	13782	6450	17000

Notes : ¹Refers to net receipts (after redemptions) of Federal Government securities, excluding Treasury bills.

²Refers to shares issued by companies listed on the KLSE.

³Includes private placement and special issues to Bumiputera/selected investors.

⁴Refers to net issues and includes Conventional, Convertible and Cagamas bonds as well as Islamic notes.

Sources : Bank Negara Malaysia, Annual Reports (various issues); Money and Banking in Malaysia (1994).

securities market accounted for the bulk of funds raised each year. However, the situation reversed in the 1990s when the Government reduced its borrowings substantially due to improvements in its financial position. The net funds raised by the private sector in 1990 were RM10.9 billion (£2.73 billion) as compared to RM3.8 billion (£0.95 billion) by the public sector. This was also in line with the Government policy of downsizing its operations in order to accelerate the privatisation policy (introduced in the mid-1980s)²⁰.

²⁰ See Bank Negara Malaysia Annual Reports (various issues).

Another significant shift in mobilisation of new funds from the public to the corporate sector is in the growth of private debt securities (PDS). Gross funds raised through PDS rose to an unprecedented high of RM8.4 billion (£2.1 billion) in 1994 from RM3.2 billion (£0.8 billion) in 1993. In addition, there was also an increase in issues of debt instruments based on Islamic principles which precipitated a more rapid development of the Islamic capital market (to function on a parallel basis with the conventional system). For example, institutions such as the *Cagamas Berhad* (National Mortgage Corporation) have for the first time, introduced Islamic bonds based on profit and loss sharing, while the unit trust industry introduced Islamic-based unit-trust funds in order to encourage Muslim investors to participate in the capital market²¹.

4.2.2 Debt-Equity Financing in the Private Sector

Indeed, the capital market has gained wider acceptance from the private sector as a cost-effective alternative to bank credit in raising investment funds. The demand for new and innovative instruments to meet the growing sophisticated financial needs of the corporate sector has been flourishing over time. Nevertheless, despite the substantial increase in funds raised through the stock market, the proportion of debt to equity financing as a source of funding for private sector investments, is still quite large. As indicated in table 4.2(a) below, between the period 1990 and 1994, the average ratio of total borrowings (domestic and foreign) to companies own funds was 37 : 63 (or 0.58). Such a *gearing ratio* indicates the potential existing in the equity-industry that remains to be tapped. Thus, companies could explore areas to mobilise even more funds from the market in order to reduce the debt portion and achieve an optimal debt-equity level. One viable possibility is to promote the unit-trust industry, especially the Islamic-based unit-trust funds, in order to attract the Bumiputera Muslims small savers and investors, whose participation is still very low.

²¹ See Bank Negara Malaysia Annual Report (1994).

Table 4.2 (a)
Private Sector Source of Financing and Investment between 1990 and 94

Year	1990	1991	1992	1993	1994 ⁵
Private Sector Source of Financing ¹ (% share) :					
Own Fund	61	73	58	62	63
Local Borrowings	26	20	23	9	12
Foreign Borrowings	13	7	19	29	25
Total %	100	100	100	100	100
	-	-	-	-	-
(RM Billion)	4.1	5.6	7.8	10.4	10.2
Private Sector Investment ² (RM Billion)					
	24.0	32.6	33.5	38.6	44.2
Funds Raised in the Equity Market ³ :					
(RM Billion)	8.6	4.4	9.2	3.2	8.2
Total Loans and Advances by the Banking System ⁴					
(RM Billion)	103.5	128.0	131.0	142.5	155.9

Notes : ¹Based on Business Expectations Survey.

²In current prices and figures include change in stocks.

³This refers to the private sector issuance of shares only and exclude the debt securities.

⁴Figures exclude consumption credit, and as at month-end July of respective years.

⁵Forecast.

Sources : Bank Negara Malaysia, Annual Reports (various issues); Economic Reports, Ministry of Finance, Malaysia (various issues).

From the figures in the table above, notice that basically, the companies own internally generated funds (which include retained earnings, reserves and provisions) have been the most important source of financing for the private sector's capital investment. Apart from the domestic borrowings from local banks, the resource gap has often been financed by foreign equity investments and borrowings. On average, the proportion of funds raised by the private sector (through the issuance of shares) in the capital market relative to its gross investment outlay between the period 1990 and 1994 was only about 21%. If the amount of corporate bonds or debt securities issued during the same period were to be included, the ratio increased to about 29%. Indeed, both these ratios are still very small relative to the amount of corporate borrowings, especially when compared to the practice and experiences of the developed markets. For

example, in the United States, the issuance of corporate bonds as a percentage of total corporate borrowings have increased from 41% in 1983 to 48% in 1992. In Malaysia, the ratio as at 1993 was only 6%²². Perhaps the further promotion and issuance of Islamic corporate bonds for the Bumiputeras would equally enhance the mobilisation of their investible funds and equity ownerships.

Table 4.2 (b)
Financing of Private Investment During the
Fifth Malaysia Plan (1986-90) and Sixth Malaysia Plan (1991-95)

Source of Financing	Fifth Malaysia Plan (1986 - 90)		Sixth Malaysia Plan ¹ (1991 - 95)	
	% Share	RM Billion	% Share	RM Billion
Internal Funds ²	61	49	40	76
Inter-company Loans ³	16	13	18	34
Bank Financing :	18	15	28	53
Domestic	(12)	(10)	(20)	(28)
Foreign	(6)	(5)	(8)	(15)
Access to Capital Market ⁴	5	4	14	27
Total :	100	81	100	190

Notes : ¹Estimate based on Fifth Malaysia Plan data.

²Comprise depreciation charges, retained profits and reserves.

³Includes subsidiaries of holding companies.

⁴Includes public shares, bond issues and sales of investment.

Source : Annual Surveys of Private Investment in Malaysia, 1986-90, Bank Negara Malaysia.

Meanwhile, in another series of sample surveys of private investment in Malaysia during the Fifth Malaysia Plan (1986-1990), the study conducted by the Central Bank revealed that private firms financed about 77% of their capital expenditure from internal funds and inter-company loans. The balance was being met through borrowings from the banking system and access to the capital market. (See table 4.2(b) above). However, the pattern of financing has started to change lately due to the sizeable expansion in private investment. This has caused a considerable drain on its internal resources resulting to the increase in their gearing ratios. The proportion of financing by

²² See Yakcop (1993).

internal funds during the Sixth Malaysia Plan (1991-1995) was estimated to reduce to 40% with total borrowings increasing to 46%. The sample survey reflects an estimated financial leverage (debt/equity) of 0.84 from a previous low of 0.52. Note that the RM4 billion (£1 billion) raised from the capital market by the sample companies (between 1986 and 1990), only represented about 20% of total net resources mobilised during the period. Based on these figures, the Central Bank estimated that the market should have the capacity to raise at least RM75 billion (£18.8 billion) during the 1991-1995 period²³, hence reflecting the vast opportunities to be tapped in the equity market.

Next, we shall appraise each of the three major segments of the capital markets, namely, the Malaysian Government securities market, the private debt securities market and the stock market, focusing on the development in the Kuala Lumpur Stock Exchange.

4.3 The Malaysian Government Securities (MGS) Market

The Malaysian Government Securities (MGS) is one of the main financial instruments issued by the Government to raise funds for the financing of its public sector development expenditure. Initially, the securities were issued mainly to meet the investment needs of the employees provident and pension funds. The market has since expanded rapidly in tandem with the Government emphasis on industrialisation and economic diversification. The market size increased nearly five-fold to RM16.8 billion (£4.2 billion) by the end of 1980, compared with only RM2.5 billion (£0.63 billion) a decade ago. Since then, the net amount of the securities outstanding grew at an average annual rate of 12.2%, recording a total of RM65 billion (£16.3 billion) at the end of 1994. Nevertheless, this amount is still very small relative to the size of funds raised by the corporate sector. In fact, the proportion of funds mobilised through the MGS market

²³ See Lin See Yan (1992 and 1994).

has significantly reduced relative to the equity and bond markets, and the trend is expected to continue. For example, in 1994 the net funds raised by the Government was only RM1.68 billion (£0.42 billion) compared to RM15.3 billion (£3.8 billion) by the private sector.

These developments are relevant to the issue of equity distribution, especially in assessing the ability of the Bumiputera Muslims investors (individuals and institutions alike) to anticipate such changing trends and growing potentials in the equity market. It becomes more important especially when the Government has, to a certain extent, replaced its MGS financing to introduce several Islamic-based instruments through the private debt securities market.

As explained earlier, the principal reason for the reduction in Government borrowings was the policy to promote the private sector's role as the main engine of growth in the economy. The Government has always relied on the MGS market for a stable non-inflationary and cost-effective source of funds to finance its budgetary operations. Consequently, a *captive* market developed because the provident funds, financial institutions and insurance companies were compelled to invest a mandatory proportion of their funds in the MGS. There was effectively no secondary market since these institutions tended to invest the bulk of their funds in the risk-free MGS and held them till maturity²⁴. Since the coupon rates on the MGS were regulated, the yields were also significantly lower than those of comparable financial assets.

Recognising the need to promote an active secondary market, several regulatory and operational reforms were conducted to liberalise and deepen the MGS market. The move also attempted to widen the range and distribution of the securities²⁵. Since 1987,

²⁴ Money and Banking in Malaysia (1994 : Ch. 16).

²⁵ For detail discussion of these reforms, see section 3.5 of chapter 3.

the pricing and yields of MGS were changed to reflect market returns. This led to an increase in the instrument's liquidity and volume of transactions in the secondary market.

Meanwhile, in its effort to inculcate savings habits, the Central Bank has recently introduced the Malaysia Savings Bond. Apart from promoting savings, the plan was also to educate the public to become familiar with the concept of investing in bonds. This new instrument, (with an issuance nominal value of RM1 billion (£0.25 billion) and a tenure of five years) was offered for sale to the public at a discount of about 33%. While the returns were tax exempted, the denomination was also kept small to make it affordable and attractive to the general public²⁶. The response was overwhelming and the issue was over-subscribed within the first three days, mobilising RM948 million (£237 million).

4.3.1 Islamic-based Investment Instruments (GII)

In addition to the MGS and savings bonds, the Government has also issued several other instruments which include the Islamic-based Government Investment Instruments (GII). These are *non-interest bearing instruments* that were initially introduced in 1983 to accommodate the needs of Islamic banking in the country²⁷. However, the demand for them has increased significantly since 1993, following the set-up of Islamic windows or *interest-free banking schemes* (IFB-schemes) by 37 financial institutions comprising 21 commercial banks, 13 finance companies and 3 merchant banks. The instruments are currently used by these institutions to meet the statutory and liquidity requirements as well as to provide an alternative investment mode based on

²⁶ The nominal value was RM100 (£25) and sold at RM67.45 (£16.9).

²⁷ It was in fact introduced with the establishment of Bank Islam Malaysia in 1983, the first and the only Islamic bank in the country as of date.

Islamic principles. Since the schemes are bound by the *Shari'ah* (Islamic law), it is not possible for them to purchase or trade in the MGS, Treasury bills, bankers acceptances or any other financial instruments that yield a predetermined rate of return. The crucial issue relating to the introduction of the GII, was the need to provide a reasonable return to the investors' funds, albeit on a non-interest basis.

After various options were considered, the Islamic principle of *Qard-ul-Hassan* (literally, meaning benevolent loan) was adopted. This implies that the purchase of the instruments by the institutions would be considered as a benevolent loan to the Government to enable it to undertake projects or provide services for the benefit of the country. Apart from the assurance that the principal amount would be returned in full at maturity, the providers of funds will also receive annual dividends at a rate to be decided by a special committee at the end of the financial year. The committee will take into account the economic conditions of the country, the existing yield levels of other financial instruments, the rate of inflation and other relevant factors as the basis for its recommendation to the Government on the appropriate dividend rate²⁸.

An interesting issue to note is that, despite the increasing number of institutions offering the IFB-schemes, the total amount of the GII outstanding as at end of 1994 was only RM4.8 billion (£1.2 billion), compared with RM65 billion (£16.3 billion) of the MGS. This clearly reflects the insignificant size of funds mobilised by the newly established schemes²⁹. Hence, unless the response towards the IFB-schemes improve, tradings of GII in the future are not expected to change significantly. Nevertheless, efforts have been made to develop the secondary market for these Islamic instruments by introducing the *Islamic bonds* within the private debt securities market.

²⁸ See Yakcop (1990).

²⁹ See section 3.3.2 of chapter 3 on the development of the Islamic banking system.

4.4 The Private Debt Securities (PDS) Market

The PDS market in Malaysia refers to the corporate bond market that represents an important complement to the equity/stock market in the private sector. The market is relatively young and only emerged after the mid-1980s. Its development took place after the inherent structural and regulatory constraints, including several investment disincentives related to the instrument, were removed. Several measures were introduced for this purpose including the setting up of Cagamas Berhad (National Mortgage Corporation) and the Rating Agency Malaysia Berhad (RAM). The function of RAM is to rate all issues of bonds and commercial papers and disseminate timely information to potential investors of both the primary and secondary issues of PDS. On the other hand, the main role of Cagamas was to purchase housing loans from the loan originators and repackage them into bearer mortgage fixed or floating rate bonds.

The securitisation and trading in Cagamas bonds in the secondary market was very active in 1989-1990 with a total turnover of RM23 billion (£5.8 billion). Spurred by the success of this move, and encouraged by the favourable regulatory and high interest rate environment, corporations increasingly turned to issuing bonds/debt securities as a replacement to bank borrowings in raising funds. Gross funds raised through the PDS market rose from only RM20 million (£5 million) in 1980 to RM395 million (£98.8 million) in 1987, RM4.2 billion (£1.1 billion) in 1992 and RM8.4 billion (£2.1 billion) in 1994. This has even exceeded the total net funds raised by the stock market last year which stood at RM8.2 billion (£4.1 billion). After considering redemptions, the total outstanding amount of Cagamas bonds as at end of 1994 was RM8.9 billion (£2.2 billion).

4.4.1 Islamic Notes and Al-Mudharabah Bonds

In an effort to widen the range of financial instruments to meet the needs of the interest-free banking schemes, the corporate sector began issuing bonds and notes based on Islamic principles. The move was also to develop a more viable Islamic-based secondary mortgage market. The instruments were initially introduced in 1990 with a total value of only RM378 million (£94.5 million). A total of RM138 million (£34.5 million) was raised by issues of securities on the basis of *Al-Bai' Bithaman Ajil* principle (sometimes known as *Al-Murabahah* or deferred payment sale) and another RM240 million (£60 million) on the basis of *Al-Musyarakah* principle (joint-participation)³⁰.

Meanwhile, Cagamas Berhad also contributed to the efforts of deepening the Islamic mortgage market by introducing the Cagamas *Al-Mudharabah* bond in 1994. A total value of RM30 million (£7.5 million) of such bonds were issued to financial institutions participating in the IFB-schemes, based on the principle of profit and loss sharing. The fund was used to purchase the Islamic housing debts from these institutions that offer Islamic housing financing facility to their clients. This marked the first time for housing loans to be securitised on an Islamic basis. In addition, *Islamic notes* worth RM300 million (£75 million) were also issued during the same period, bringing the total funds raised through Islamic-based securities in the PDS market to RM330 million (£82.5 million) or about 4% of the total funds mobilised in the market. This is indeed very small by any standard. Before looking at the stock market, we shall briefly evaluate the relative size of funds raised through the various Islamic instruments and schemes introduced so far and its implications for the existing financial system.

³⁰ See Bank Negara Malaysia Annual Report (1990).

4.5 Funds Mobilised Through Islamic Accounts and Instruments

Apart from the efforts to redress the prevailing economic imbalance among the various ethnic groups, the long term goal of the Government has always been to develop a viable Islamic capital market and banking system. This is expected to function on a parallel basis with the established conventional financial system and essentially fulfils the needs of the large Muslims population. In analysing the potential of realising such an aim, it is useful at this stage, to analyse and relate several figures and issues that have been put forth earlier. This will enable us to gauge the responses received from the various quarters and reflect upon the challenges that lay ahead especially for the Bumiputera Muslims investors.

Table 4.3
Funds Mobilised Through the Conventional Banking System and Capital Markets vis-à-vis the Islamic Banking System and Instruments as at end of 1994

Conventional Financial System	RM Billion	Islamic Banking System and Instruments	RM Billion
1. The Banking System :		The Islamic Banking System¹ :	
Total Assets	441.7	Total Assets	5.2
Total Deposits Mobilised	232.1	Total Deposits Mobilised	4.7 (2.9) ²
Total Loans Extended	195.8	Total Financing Extended	1.7 (1.2)
2. Malaysian Government Securities Market :		Malaysian Government Securities Market :	
Total MGS Outstanding	65.0	Total Islamic GII ³ Outstanding	4.8
3. Private Debt Securities Market :		Private Debt Securities Market :	
Total Cagamas Bonds Outstanding	8.9	Total Islamic Notes and Cagamas Mudharabah Bonds Outstanding	1.1 ⁴

Notes : ¹The Islamic Banking System comprises Bank Islam Malaysia and 37 other financial institutions operating interest-free schemes.

²Figures in brackets refer to Bank Islam alone.

³GII is the Government Investment Instruments (or Certificates).

⁴This amount assumes no redemption from initial issuance in 1990.

Source : Bank Negara Malaysia, Annual Report 1994.

Apart from the equity market (which will be analysed in the following chapter), we have thus far discussed the development of the Islamic banking system (in chapter three) and the issuance of several Islamic-based financial instruments, both in the Malaysian Government securities market and the private debt securities market. In table 4.3 above, we summarise some of the information and related figures, with the objective of comparing the relative size of funds raised/mobilised through the conventional financial system vis-à-vis the Islamic instruments/banking system as at end of 1994.

Notice that the volume of funds mobilised through the issuance of Islamic instruments and the Islamic banking system were relatively insignificant when compared to the established conventional institutions. In fact, most of the funds have been concentrated within Bank Islam Malaysia rather than the remaining thirty-seven financial institutions which operate the interest-free banking schemes (IFB-schemes)³¹. The breakdown of deposits placed by individuals, public sector and corporate sector in the Islamic banking system are 47%, 45% and 8% respectively. Despite the efforts made by the Central Bank and the Government, the issuance of Islamic notes and the RM30 million (£7.5 million) Cagamas *Al-Mudharabah* bonds were still negligible, compared to RM8.9 billion (£2.2 billion) of Cagamas bonds outstanding. It is also obvious that the total outstanding Government Investment Instruments (GII) of RM4.8 billion (£2.4 billion) was closely related to the total deposits of RM4.7 billion (£1.18 billion) within the Islamic banking system, for which the instruments were issued.

Apart from Bank Islam Malaysia which has been operating since 1983, the remaining instruments are relatively new, having only been introduced in 1993. Nevertheless, setting aside (the probable excuse of) the infancy stage of the instruments, the above experience again demonstrates that, the process of developing an alternative

³¹ Recall that the term *Islamic banking system* in Malaysia refers to an environment that comprises one Bank Islam Malaysia and a group of 21 conventional commercial banks, 13 finance companies and 3 merchant banks that offer the Islamic-window services or the interest-free banking schemes (IFB-schemes).

Islamic financial system does not end with the issuance of Islamic instruments or establishment of Islamic financial institutions alone. In fact, institutional development and regulatory reforms only facilitate the process of establishing it. Much of the success in realising the system depends on its ability to offer competitive returns, attractive investment incentives, appealing and innovative products and services, and most importantly, the ability to draw meaningful responses from both the public and the corporate sector alike. The task is made more delicate in a multi-religious and multi-ethnic environment. Indeed, it requires more than the simple political will of the Government and is much more challenging than some of the theories propounded in Islamic economic literature. The process also requires elucidating and educating the public, in particular the Muslims community (rather than compelling them), toward the distinct features of the system and what it has to offer.

Next, we shall discuss the development of the Malaysian corporate equity (stock) market and the Kuala Lumpur Stock Exchange. This will provide a useful background when we examine the issue of low-participation and investment behaviour of the Bumiputera (Muslims) investors in the following chapter.

4.6 The Corporate Equity (Stock) Market

In general, the equity market in Malaysia has developed in tandem with the economy. Since its early years of establishment (as Malayan Stock Exchange in 1960, before being restructured as the Kuala Lumpur Stock Exchange, KLSE in 1973)³², trading has often been intense and speculative. Floatation of new issues has always been

³² Prior to 1973, the Stock Exchange of Malaysia operated as a single entity with Singapore. The separation in 1973 was virtually based on economics and operational expediency. Nevertheless, the two Exchanges maintained close links by having 'common-price, dual-listings' of more than 200 companies on both bourses. However, this arrangement has made both Exchanges vulnerable to events and development in each others market. Effective in 1990, the decision was to de-list and reorganise all the 235 companies (182 Malaysian-incorporated/53 Singapore-incorporated) from the respective Exchanges and since then KLSE has become the only official market for Malaysian stocks.

very popular with many of them substantially oversubscribed. As Ahmad (1991) noted, the bulk of the subscriptions came from local savings, but many of these purchases were apparently for speculative reasons as observed by the very high price to earnings multiples (or commonly referred as P/E ratios). Apparently, the market was not properly supervised or regulated until 1973 when the Securities Industry Act was introduced. This Act attempted to provide the Government with the legal authority to curb excessive share speculation, insider trading, short selling, share rigging, and other forms of market manipulation. Subsequently, the Act was revised in 1983 and the *Securities Commission* (SC) established in 1993, in order to provide a more effective supervision and control of the industry, and wider power to the authorities to regulate the operation of the market.

Over the years, the situation improved to a reasonable level of maturity, liquidity and efficiency. In comparison with several emerging markets in Asia, the stock market in Malaysia is fairly well-developed in terms of size, breadth, depth and resilience. There is currently a large group of market-makers, corporate dealers, stockbrokers, domestic and foreign fund managers, remisiers, and a broad range of individual and institutional investors in the market. Apart from the first *Islamic stockbroking company* established last year, there are at least sixty other stockbrokerage firms operating in the country. At the end of 1994, there were a total of 478 companies listed on the two boards of the KLSE (the Main Board and Second Board), with a nominal value of RM76 billion (£19 billion) and market-capitalised at RM509 billion (£127.3 billion). The listing of 347 companies on the Main Board are spread over ten different counters, broadly divided into industrials, finance, commodities and properties.

Some of the key figures reflecting the growth and development of the KLSE have been summarised in table 4.4 below. Increases in the volume of funds mobilised in the equity market had been significant, particularly in the more recent years, increasing from RM604 million (£151 million) in 1985 to RM10.3 billion (£2.6 billion) in 1992 and RM10.1 billion (£2.5 billion) in 1994. These were done mostly by ordinary share

Table 4.4
Growth and Development of the Kuala Lumpur Stock Exchange
between 1985 and 1994

Year	Total Number of Companies Listed on the KLSE	Nominal Value RM Billion	Market Value ² RM Billion	Funds Mobilised ³ RM Billion	Annual Trading Volume Billion Units	Annual Trading Value RM Billion	Daily Trading Volume Million Units	Daily Trading Value RM Million
1985	284	22.6	58.3	0.60	2.9	6.2	11.9	25.7
1986	288	23.5	64.5	0.43	2.3	3.4	9.2	13.6
1987	291	26.6	73.9	1.10	5.3	10.1	21.4	40.8
1988	295	29.4	98.7	1.10	4.0	6.8	16.3	27.6
1989	307	34.3	156.1	2.57	10.2	18.5	41.6	76.0
1990 ¹	285	35.3	131.7	9.93	13.2	29.5	53.6	120.5
1991	324	41.7	161.4	4.06	12.4	30.1	49.6	120.9
1992	369	53.2	245.8	10.25	19.3	51.5	77.7	207.5
1993	413	61.6	619.6	4.53	107.7	387.2	432.7	1555.3
1994	478	75.9	508.9	10.12	60.1	328.1	242.5	1322.8

Notes : ¹This year marked the delisting of Singaporean companies from the KLSE.

²This is also referred as the market capitalisation, given by the formula -
(no. of shares outstanding x market price of shares).

³These are funds mobilised by Malaysian companies and include all forms of issues, private placements and restricted offers for sale.

Sources : Investing in the Stock Market in Malaysia, Kuala Lumpur Stock Exchange (1995), Bank Negara Malaysia, Annual Reports (various issues); Economic Reports, Ministry of Finance, Malaysia (various issues).

issues, term notes, loan stocks, and various forms of warrants. The average daily volume traded on the KLSE during the last two years was 338 million units of shares worth about RM1.44 billion (£0.36 billion). Earlier in 1993, the market was extremely bullish to the extent that a total of 107.8 billion shares valued at RM387.2 billion (£96.8 billion) changed hands. This phenomenon was unprecedented in the history of the bourse, and surpassed the total volume and value of shares traded over the past twenty years³³. However, the bullish run or buoyancy was short-lived, and the stock market experienced a major correction in 1994, both in terms of share prices and trading volumes, when they declined by about 24% and 44% respectively. The P/E ratios have

³³ Despite the buoyancy, notice the significant reduction in volume of funds raised in 1993. This was primarily due to lower net issues by the private sectors and the absence of new privatised companies from the public sector which have already mobilised more than RM6 billion (£1.5 billion) in the previous year.

also swung from around 24 in the preceding years to as high as 48 in 1993 before moderating to about 28 in 1994. This volatility and speculative characteristic of the market have led fund managers and institutional investors to reassess their investment portfolios in terms of their risk-return trade-off. We shall examine these issues in more detail a little later.

Meanwhile, the unit trust industry has also expanded rapidly in tandem with the strong performance in the KLSE during the last few years. Several important developments and reforms have contributed to its significant growth. This includes the relaxation of investment guidelines on the unit trust funds. The amendments allow greater flexibility for fund managers to manage their portfolios in order to earn higher yields for unitholders. Several *Islamic unit-trust funds* have also been introduced to provide additional avenues for Muslim investors to participate in the capital market. At the moment there are at least three Islamic-based trust funds in the market³⁴. At the end of 1994, there was a total of 51 unit trust funds managed by 19 companies with a total volume of 25.1 billion units in circulation held by 6.2 million investors. The aggregate market value of these funds was RM35.9 billion (£9 billion) which made up only about 7% of the total market capitalisation of equities.

Indeed there is an immense potential to develop the unit trust industry further, especially in mobilising funds from small investors and savers. With the development of the Islamic banking system, it is expected that the financial institutions which offer the interest-free banking scheme, would also be offering to manage Islamic unit-trust funds. In terms of investment, on average about 90% of the investible funds are usually invested in the stock market; however, lately the proportion has fluctuated in tandem

³⁴ The first Islamic unit trust fund in the country was introduced by the Arab-Malaysian bank (Tabung Ittikal) in 1992. The Bank Islam Malaysia unit-trust was launched in June 1994 with only 150 million units; further information on the remaining Islamic trust funds are not available at the time of writing.

with the performance of the latter³⁵. More of the unit-trust industry will be covered in the following chapter.

Next, we shall appraise the Kuala Lumpur Stock Exchange, examining its structural development, characteristics, listing requirements, rules and regulations, trading mechanism, price volatility, form of market efficiency and several other related issues.

4.7 The Kuala Lumpur Stock Exchange³⁶

Although many of the features of KLSE are typical of most stock exchanges in the developed world, the aims are : firstly, to illustrate its potential as a vehicle for the Bumiputera Muslims to enhance their equity ownership, and secondly, to facilitate our future discussion on the legitimacy (or otherwise) of *share trading from the Islamic perspective*. This will enable us to offer evidence in order to refute (or accept) the claims of its unlawfulness by some conservative Muslim scholars. In any case, it is important to realise that the essence of *Shari'ah* ruling on the legality of any trade is not based solely upon the nature of business (of the company), but also on the underlying nature of contract between parties, as well as the presence of fairness, unambiguity and security of all parties involved³⁷.

³⁵ For example, when the stock market underwent correction and was sluggish in 1994, there was a shift in investment of the unit trust funds from the stock market to other liquid instruments such as short-term fixed deposits and money market papers. (See Bank Negara Malaysia Annual Report 1994).

³⁶ Unless otherwise mentioned, most of the facts and figures in this section have been drawn from numerous official publications, including the followings : Investing in the Stock Market in Malaysia (1995), Securities Commission Annual Reports (1993/94), KLSE's official publications, Bank Negara Malaysia Annual Reports (various issues) and Economic Reports, Ministry of Finance (various issues).

³⁷ Interestingly, these features are known to prevail in most well regulated and established Exchanges. We shall however, defer the discussion of these concepts to a later chapter.

The basic role of a stock exchange is to provide a central market place (or a forum) for buyers and sellers to conduct business transactions in shares, bonds and different types of securities of companies. It does not buy or sell securities on its own. Likewise, the main objective of the Kuala Lumpur Stock Exchange (KLSE) as a secondary market³⁸, is to provide and maintain a facility for the trading of shares in companies listed on its Exchange. The existence of an active secondary market is very important because it provides liquidity for investors and helps to stimulate the growth and development of the primary market. The latter would be seriously hampered in its function of bringing new issues, if investors do not have the subsequent ability to liquidate their securities at a fair price in the secondary market. As we shall see later, the degree of liquidity in the market-place is measured by the time and/or cost of converting a security into cash³⁹. Hence, the presence of a well developed and efficient secondary market makes the primary market operate more effectively.

4.7.1 Membership and Regulatory Structure

The KLSE is a public company limited by guarantee and was formed under the Malaysian Companies Act 1965. It, therefore, has no shareholder and no share capital. It only has members with the membership confined to individuals and corporations who must be shareholders of stockbroking companies. The business of dealing in securities is carried out by dealers or remisiers of these stockbroking companies with limited liability⁴⁰. To be admitted as a member of the Exchange, the candidate (either an

³⁸ Although the stock market has often been thought of as both a primary and secondary market, a distinction needs to be made between them. A *primary market* constitutes the facilities for the initial sale and underwriting of securities (both debt and equity), either in the form of an entirely new floatation or in the form of an (rights issue) offer to existing investors. On the other hand, the *secondary market* is the market in which existing securities are subsequently traded.

³⁹ A market liquidity is also measured by the ratio of (total turnover value/market capitalisation value).

⁴⁰ These stockbroking companies (often referred as Member Companies) could either be publicly or privately owned, but not sole proprietorships or partnerships.

individual or corporation) has to fulfil a series of stringent measures and requirements, aimed at maintaining the integrity and security of the market. For example, in the case of a local corporation applying for membership to KLSE, the company is required to acquire at least 51% of the equity of the stockbroking company and also have minimum shareholders funds of RM100 million (£25 million). At the end of 1994, there were at least 60 member companies and 122 members on the Exchange, including more than ten foreign-owned⁴¹ corporate members.

The KLSE is relatively liberal to foreign participation, compared to several other markets in the region which have varying regulations in their openness to foreign investors⁴². This enhances the liquidity in the market and creates healthy competition. Although foreign ownership of companies is generally restricted to 30% in Malaysia, the limit can be increased subjected to the Government's approval. At the end of 1994, there were almost 375,000 foreign shareholders (which made up 13% of the total holders), holding more than RM12.8 billion (£3.2 billion) or 19% of the total equity in the stock market alone. In addition, the number of foreign country funds investing in the KLSE has also risen from 29 in 1988 to more than 80 in 1994.

In terms of regulation, the securities industry in Malaysia is governed by a host of Acts, regulating various aspects of the industry with the objective of ensuring a healthy and orderly development of the capital market as well as protecting the investor's interest. There are at least five regulatory bodies responsible for the supervision and management of the industry including the Securities Commission and the KLSE itself. Meanwhile, as a self-regulatory organisation, the KLSE governs the

⁴¹ These are broking companies having foreign broking houses as their major shareholders.

⁴² In particular, the markets in Hong Kong, Singapore and Kuala Lumpur are noted for being liberal with virtually complete access to foreign investors, subject to only a few restrictions (such as predetermined limits to foreign ownership of some key companies/industries stocks in Singapore and Malaysia). The Taipei and Seoul markets in contrast are accessible only through specially approved investment funds, designated for non-residents. In Bangkok and Manila, foreigners are allowed to participate in the markets but with the ownership of each counter subjected to certain limits (in most cases, not exceeding 49%).

conduct of its members in securities dealings and is responsible for the surveillance of the market place as well as for the enforcement of its listing requirements.

4.7.2 Listing Requirements and Corporate Disclosures

The listing requirements spell out the criteria for listing, disclosure requirements, continuing obligations and standards to be maintained by listed companies. Basically, there are two main listings on the KLSE : the Main Board (for the more established companies) and the Second Board⁴³ (for the newer and medium-size companies). The listing requirements are aimed at securing confidence of investors in the market by ensuring that any listed company has a sizeable amount of paid-up capital, has a good track record of at least three to five years, made reasonable profits throughout the period, has a forecast pretax profits of at least RM5 million (£1.25 million) and sets out sufficient information in the prospectus about itself⁴⁴. However, compliance with the quantitative criteria alone does not automatically qualify a company for listing. Emphasis is also being placed on the qualitative aspects which include having a qualified management team, a good business viability, and reasonable diversification of risks. In addition, the rules also ensure that trading of securities is conducted in a fair and open basis and that investors are treated with proper consideration at all times by the board of directors.

As private companies increasingly turned to the equity market for new funds, adequate regulation became necessary not only to promote the quality of new listings but more importantly, to protect the interest of investors, particularly the minority

⁴³ The Second Board was only introduced in late 1988 to encourage smaller but viable companies with strong growth potential to be listed. Besides, it will also enlarge the security market base and offer the investing public with a wider spread of product diversity and risk susceptibility. Many of these companies have since grown in size and moved to the Main Board.

⁴⁴ For a detailed explanation of listing requirements, see Investing in the Stock Market in Malaysia (1995).

shareholders. The guidelines on new issues of securities and the valuation of public limited companies have been revised from time to time so as to reflect the current situation and level of professionalism in the industry. Apart from the listing requirements, there are numerous other rules and regulations that listed companies need to comply with, including policies on corporate disclosure, mergers and take-overs procedures, insider tradings, offering of rights and bonus issues and a host of other market activities. The policy on corporate disclosure compels a listed company to make immediate public disclosure and dissemination of material information relating to investment in the company.

Although the practice is considered very essential from both the professional and Islamic perspectives, it is common to find corporations in Malaysia not making adequate financial disclosures, partly because the major domestic corporations are controlled by prominent families and private individuals. Apart from annual statements, listed companies usually publish brief unaudited financial reports, often only when the results are favourable⁴⁵. Investors need to have the necessary facts to make informed investment decisions within their own risk preference. The ready availability and widespread dissemination of an up-to-date and adequate supply of key financial information is necessary to enhance investors' confidence and participation in the market; besides it would also conform to the Islamic requirement in removal of any *gharar* (uncertainty or ambiguity) in its investment. The recent guidelines by the Securities Commission have made several improvements to these ends.

4.7.3 Nature of Companies and Types of Instruments

In terms of companies listed on the KLSE, the number has increased rapidly over the last few years. Within a span of four years (1990-1994), there was a total of 193 new

⁴⁵ See Lin See Yan (1993).

companies that were listed on the two boards of KLSE. This was basically attributed to the Government's privatisation policy, buoyant economic conditions, ample liquidity in the market and relatively low interest rates. There was also an increasing awareness among the corporations on the effectiveness of the equity market as an alternative source of funding. Consequently, as at end of 1994, there was a total of 478 companies listed on the Exchange (with 347 of them on the Main Board and the remaining 131 companies on the Second Board) having a total nominal value of RM75.9 billion (£19 billion) and total equity (or paid-up capital) of RM67.5 billion (£16.9 billion)⁴⁶.

While companies on the Second Board have been grouped as one counter, the Main Board is divided into ten different sectors, each comprising companies with related businesses. The distribution of the counters and its proportion of equity are as follows : Consumer Products (52 - 9.7%), Industrial Products (73 - 14%), Construction (17 - 4.4%), Trading/Services (56 - 27.2%), Finance (44 - 14.6%), Hotels (5 - 3.1%), Property (45 - 12.5%), Plantation (38 - 8.8%), Mining (11 - 0.9%), Trust (3 - 0.5%) and Second Board (131 - 4.2%)⁴⁷. In addition, there is also a separate Loans sector that classifies all listed loan stocks/notes and bonds.

The variety of securities being traded by these counters ranges from the common stocks and shares to preferred stocks, redeemable preference shares, share options, bonds, debentures, various forms of loan stocks, loan notes, property unit trusts, transferable subscriptions rights, common and call warrants and many others. By the year-end, several financial derivatives such as swaps, financial futures and options, stock indices and stock options are also expected to appear in the market. The changing

⁴⁶ Note the difference between nominal or par value of shares (which is also referred as nominal or authorised capital) and total equity or the paid-up capital.

⁴⁷ The figures in parenthesis refer to the number of companies within the respective sector and its proportion of total equity. Generally, in terms of portfolio investment, these sectors are broadly categorised as Industrials, Commodities, Properties, Finance and the Second Board. As we shall see later, on average more than 50% of tradings are usually concentrated on the Industrial counters. In fact, Industrial Products and Services counters alone accounted for more than 40% of the total market equity.

landscape of interest rate liberalisation, securitisation and reforms in the capital market have made it conducive for the trading of these instruments. Their availability would allow investors and fund managers to hedge their positions in the market. To what extent these complex instruments would affect the Bumiputeras participation (let alone its Islamic permissibility), remains to be seen.

4.7.4 Operation and Trading Mechanism

Unlike the more established bourses such as the New York Stock Exchange and the Tokyo Stock Exchange which maintain the traditional open outcry system on the trading floor, trading on the KLSE is fully automated whereby orders are entered via computer terminals at stock broking companies and routed to the KLSE's trading computers for matching and execution. Following the system's implementation in 1989, there was a sharp increase in trading volumes.

A transaction within the computerised system begins with an order from a client through a broking office to buy/sell a certain quantity of shares, not exceeding 500,000 units (or 500 lots) within a prescribed price limits. What follows is a series of technical details, security features and procedures to ensure a fair and orderly trading in the market. A limit is imposed on the highest and lowest price that a stock can be traded for each trading session of the day, so as to check upon any unwarranted price fluctuations. The upper and lower limit of the price at present is fixed at 30% above and below the respective closing prices of the previous trading session. There are two trading sessions in a market day. A company would normally be queried by the Exchange if the price or volume of its securities moves by a certain percentage within a day or a week of trading.

4.7.4.1 Types of transactions

Basically, there are two forms of orders, the *limit order* and the *market order*. The limit order refers to an order which is to be executed at the price entered into the system or better, while market order refers to an order which is to be executed at the matching price. Although the orders keyed-in during trading hours are picked on a sequential basis, the matching of orders is based on price preference and time preference. Once an order has been entered, it could still be cancelled or reduced provided it has not been fully executed. In short, apart from utilising automation to enhance trading efficiencies, the computerised system replicates almost all the characteristics of an established open outcry system.

In general, there are only two types of transaction : the *cash transaction* and the *margin transaction*. In a cash transaction, the settlement for the purchase of securities must be made within the time period specified in the settlement rules of the Exchange, which is on the seventh market day following the deal (T+7). On the other hand, under margin transactions, a client is required to place certain acceptable form of collaterals when purchasing securities and the sum of his collaterals and securities purchased must not be less than 150% of his outstanding balance⁴⁸. In the case of a sale, the selling client is required to deliver his scrip to his broker on the fourth market day after the contract date (T+4), failing which the Exchange will institute an automatic *buying-in* order.

Buying-in is an action taken against the selling broking company/client by the KLSE for failing to deliver the sold securities within the prescribed time. As a penalty, the shares traded under the buying-in process is usually at a price that is 10 bids above

⁴⁸ In its effort to boost trading in the capital market, the authorities have recently allowed banks to extend loans which are secured by shares of up to 15% of their values. In addition, contributors to the provident and pension funds have also been allowed to utilise 20% of their funds exceeding RM50,000 (£12,500) for investments in the stock market.

the market price. It is interesting to note that although *short-selling* is illegal on the KLSE, *contra-transaction* is allowed⁴⁹. However, the contra dealing facility is a privilege accorded by the broking company to its clients, rather than a right of the investors.

As a further step to provide more liquidity in the market and promote the growth of the equity market, the authorities are examining the feasibility of introducing *stock lending* in the market, as well as legalising short-selling, a prerequisite of stock lending⁵⁰. The move is expected to increase the volume of transactions further, especially in an environment of *scripless trading system* in the near future⁵¹. The operation of this system will not require any physical delivery or receipt of share certificates; instead, the client's computerised account with the stockbroking company will be debited or credited according to the fundamental book-entry system. For example, in cases of public issues, the successful applicants will then obtain credits in their accounts instead of receiving physical scrips.

⁴⁹ *Short-selling* is the practice of selling shares in which the seller, at the time of sale, does not own those shares in anticipation of an eventual fall in the share price. If the fall materialises, the short-seller will gain from the difference between the lower market price and his higher selling price; otherwise, he loses. During the interval, he normally borrows share certificates from his broker to fulfil any delivery requirements. On the other hand, in *contra-trading* the customer neither collects nor delivers the securities he trades, rather an arrangement is made with his broker to settle any outstanding difference, be it profits or loss, at given intervals of time. Most conservative Muslims scholars have rejected *short-selling transaction* as *illegitimate* on the premise of selling/trading in something that one does not possess, hence involving uncertainty or *gharar*. Many others have equally frowned upon contra-trading and likened it to 'veiled-gambling'.

⁵⁰ *Securities (stock) lending* refers to the lending of shares and bonds from an investor's portfolio (such as unit trusts, mutual funds, insurance companies, etc.) to meet the temporary unexpected needs of other parties (such as dealers, market-makers, arbitrageurs, etc.) in situations such as settlement failures and trading strategies involving short-selling.

⁵¹ Currently, the system is running on a parallel basis with the existing scrip-based clearing system.

4.7.4.2 Cost of transactions

Transaction costs at the KLSE are considered to be relatively very competitive among the markets in the region. Basically, there are three forms of charges to be borne by both the seller and the buyer : the brokerage costs, the clearing fee and the stamp duty. The brokerage costs on securities traded is based on a graduated commissions scale, which is 1% on the first RM0.5 million (£0.13 million) of the price traded, 0.75% on the next RM1.5 million, (£0.4 million) and 0.5% thereafter. On the other hand, the clearing fee and the stamp duty have been set at a flat rate of 0.05% and 0.1% of the transacted value, respectively. Thus on average, the total transaction costs payable by a client is about 1.15% of the transacted price of his securities⁵².

In terms of taxation, although there is a 30% corporate tax at source for all dividends income, there is no capital gains tax in Malaysia. Nevertheless, the tax deducted is treated as a tax credit when a resident files his tax returns. In addition, interest earned from investment in Malaysian Government Securities and non-convertible bonds are also tax exempted.

4.7.5 Market Performance and Related Issues

Along with its rapid development in the past few years, the KLSE has grown significantly in terms of size and trading activity. (See table 4.4 in section 4.6 above). The recent growth of the stock market reflected, to a considerable extent, the impact of the Government's privatisation programme. The implementation of this policy provided a steady and significant source of new listings and funds to the market. For example in 1990, the privatisation of *Telekom Malaysia* (the telecommunication company) alone,

⁵² As a comparison, the transaction costs in Singapore are also payable by both buyer and seller on a downward sliding rate of 1% for the first S\$250,000 (RM426,000). Like Malaysia, there is no capital gains tax in Singapore, however it deducts at source a 27% withholding tax on dividends income.

accounted for 27% of the total funds of RM8.6 billion (£2.15 billion) raised from the stock market; while in 1992, the public offers and rights issue of three privatised companies namely, *Tenaga Nasional* (the country's electricity utility), *Proton* (the car manufacturer), and *Malaysian Airline System*, together made up 62% of new funds raised. In fact, the top ten companies on the Exchange accounted for almost 45% of total market capitalisation of RM509 billion (£127.3 billion), with Telekom and Tenaga holding 17% of the total value between them⁵³.

The list of privatised companies targeted for listing on the KLSE will continue to grow as the Privatisation Master Plan envisages a divestment of 246 public sector enterprises, valued at RM16.3 billion (£4.1 billion) over the short, medium and long term⁵⁴. What is interesting to note in relation to the issue of Bumiputeras equity ownership is the tendency (or the policy) of the Government to allocate a substantial proportion of these new floatation to the community (directly or indirectly) in the hope of hastening its achievement of the 30% target. However, records have shown that the results are far from its expectation, leading us to seek further explanation of the underlying reasons.

Meanwhile, in common with many Asian markets, large amount of foreign funds - mainly from the United States - flooded into Malaysia in early 1993. Retail investors within the country followed the foreign lead and accounted for about 70% of trading volumes during the period. As a result of the increased liquidity in the market, stock indices reached successive peaks with the number of shares traded sometimes exceeding levels in New York and Tokyo. However, the increased volumes and the rise in stock indices have not always moved in step. For example, there were times when the market experienced frenzied activity from local speculators, but the country index, dominated

⁵³ See Financial Times (February 7, 1994).

⁵⁴ See Lin See Yan (1993 and 1994).

by blue chips, responded only sluggishly. These forms of trading patterns were typical of an emerging market in a developing economy, especially in an environment whose trading volume comprised of a large proportion of retail investors (70%) relative to institutional investors (30%)⁵⁵. In a mature and developed market, unlike the KLSE, the ratio is normally the reverse, that is 30:70 respectively.

These retailers are usually small individual investors who are more interested in short-term capital gains rather than long-term growth and dividend yields. If the market is to mature, there is a need to increase the size of the institutional investors where individual investors can still participate through unit trusts and pension funds, which are being managed by professional fund managers. However, there is still an acute shortage of these professionals and expertise in the market⁵⁶. In addition to this problem, as in many Asian countries, there have also been numerous occasions where investment assessments in the market were more influenced by a company's political connections rather than its merits or fundamental values. Despite it being the largest market in South-East Asia, it is also known for its high price-earnings ratio, relative to other competing markets in Asia. In short, the environment has created a relatively volatile and speculative market with wide fluctuation and dispersion in its risk-return relationships.

The common complaints among the less knowledgeable (Bumiputera) investors are that the market is prone to price manipulation, easily subject to market rigging, overly speculative, susceptible to rumours, not to mention insider trading and related activities based on market power and imperfect information. In essence, the market

⁵⁵ At the end of 1994, individual investors accounted for more than 95% of shareholders holding only 16.7% of total equity, relative to institutional investors (2.3%) holding 43% of the equity. The remainder were being held by the nominee companies, state agencies and others. (See next chapter for further details).

⁵⁶ To overcome the problem, the authorities are currently allowing stockbroking companies to operate unit trusts in addition to their current activities.

price does not reflect the underlying values of the shares. Although some of these allegations have been overstated, the pertinent issue is : if the capital market were to be seen by the Government as one of the most important means to achieve its target of acquiring 30% corporate sector wealth for the Bumiputeras, it is important not only to regulate the market and understand the problems and characteristics of its investors, but more significantly, to assess its ability in appealing to the community, as well as its potential to accomplish such ends. Thus, apart from justifying the market's integrity, fairness and reliability⁵⁷, it is also relevant to examine the effectiveness, efficiency and opportunity-cost of the stock market as a long-term investment alternative, relative to investment in real-estates, housing or fixed-deposits in the banking industry. The following section attempts to highlight some of these aspects, particularly the market's volatility and its efficiency.

4.7.5.1 Market Volatility

In a market economy, investment decisions are guided by asset prices and if these prices vary widely, investment decision-making would be harder to make. Volatile asset prices thus correspond to investment risk, that is, the larger the fluctuation, the higher the risk. If we consider that investors are generally risk-averse, then facing an environment of frequent excessive volatility may be worrisome for both the investors and the long-term health of the economy.

Stock market prices tend to fluctuate more than other economic variables, even in fully developed markets. However, empirical evidence showed that the capital markets in developing countries exhibited much greater volatility than those of advanced economies⁵⁸. One of the most commonly used techniques to measure market

⁵⁷and probably its conformity to the Islamic mode of business trading....

⁵⁸ For example, in one of the studies, Singh (1992) compared the standard deviations of developing and developed-country price-indexes for sixty-months ending December 1989. His findings showed that almost all of the developing countries (especially those of Latin America), had very high standard

volatility (and hence risk), is to calculate the standard deviation of returns, which measures the amount by which returns differ from the average, over a period of time.

The study by Singh (1992) on countries' main stock-price indices (for sixty months between 1984 and 1989), indicated a standard deviation of 8.23 for the Malaysian market and 5.88 for the U.K.(FT-100) market. These standard deviations were based on the observed monthly percentage changes in share prices of the respective countries, denoted by their main price indices. The mean-value of the sixty months percentage changes were 1.05% and 1.31% respectively. In other words, the results suggest that on average, over this period share prices on the Kuala Lumpur Stock Exchange arose by 1.05% per month (in US dollar terms). Further, on the assumption that percentage monthly price changes were normally distributed, the prices could have risen or fallen by 8.23% from its mean-value for two-thirds (or 68% at 1) of the months, as compared to 5.88% for the U.K.'s market.

It is important to realise that a high degree of volatility (as reflected by the standard deviation) in the stock market can undermine the financial system as a whole; besides, it also makes share prices much less useful as a guide to the allocation of resources. Moreover, to the extent that they discourage risk-averse investors, stock market fluctuations may even raise the cost of capital for corporations.

The information in table 4.5 below shows more recent performance level of the Malaysian market relative to a few selected equity markets in the region. Notice the large swings in the main stock-indices in all the markets between 1992 and 1994. The Sharpe ratio which provides a measure of performance that is risk-adjusted, also confirmed the riskiness and volatility of these markets. In 1993, there was a strong showing of equity markets world-wide whereby the Far East markets advanced by 34%,

deviations of percentage price changes relative to the developed markets of U.S.(S&P 500), U.K.(FT-100) and Japan (Nikkei). This reflects the volatility and risk-return complexion of the emerging markets.

followed by Europe with 26%. However in 1994, with a higher than expected economic growth and increasing interest rates in the US, there was a swift re-allocation of funds away from the volatile emerging markets⁵⁹. The result was a shrinking global liquidity affecting most of the East Asian markets, especially Malaysia and Hong Kong. As a consequence, the prices on the KLSE moderated, lowering its P/E ratios, increasing its risk-return profiles, and resulting in a reduced market capitalisation⁶⁰. Such a situation is a common phenomenon for developing economies which are overly dependent on foreign funds.

Table 4.5
Performance of Selected Equity Markets between 1992 and 1994

Countries	Taiwan			Hong Kong			Singapore			Malaysia		
Year 19..	92	93	94	92	93	94	92	93	94	92	93	94
Percentage changes of main country index ¹	-27	80	17	28	154	-31	2	59	-8	16	98	-24
Comparative Price Earnings Ratio	23.5	37.9	41.3	13.2	21.0	11.3	17.5	27.9	28.5	23.0	48.0	28.0
Sharpe Ratios ²	n.a.	0.3 ³	1.0 ³	n.a.	3.2	-1.5	n.a.	3.7	-1.1	n.a.	3.7	-1.1
Comparative Liquidity Ratios ⁴	n.a. ⁵	1.8	3.1	n.a.	0.3	0.5	n.a.	0.5	0.4	0.2	0.6	0.6
Capitalisation in (US\$ Billion)	100	170	230	172	392	280	50	136	175	91	228	196

Notes : ¹These refer to the performance of the selected equity markets in terms of % change of each country's main stock index.

²The Sharpe ratio = (annualised return - average risk-free rate)/annualised volatility, i.e. the higher the ratio, the better is the performance

³These are return-risk ratios (as Sharpe ratios are unavailable).

⁴Liquidity ratio = (turnover value/market capitalisation), i.e. the higher the value, the more liquid is the market.

⁵n.a. - Not available.

Source : Securities Commission Annual Reports (1993 and 1994).

⁵⁹ Net funds flowing into emerging stock markets in 1994 has been estimated at only US\$40 billion, down from US\$62.4 billion in 1993, and the estimate for 1995 is even lower.

⁶⁰ Apart from 1993 when the buoyant market pushed up the KLSE's P/E ratio to 48, the average ratio over a span of ten years was about 26. This is slightly higher than Singapore but very much higher than most developed markets. The higher the P/E ratio, the more expensive is its investment and the longer the time for the investor to recoup his capital outlay.

4.7.5.2 Market Efficiency

Among the many important considerations that fund managers or institutional investors often consider before investing in a particular market is its level of efficiency. This factor is generally associated with the risk-return relationships in the market. Its presence will facilitate investors in constructing a well-diversified portfolio of their securities-holdings to achieve optimal investments.

An efficient market is defined as one in which prices fully reflect all relevant available information. In a perfectly efficient⁶¹ situation, the market is not only (*informationally*) *price efficient*, but also *economically efficient*⁶². When a market is price efficient, strategies pursued to outperform a broad-based stock market index will not consistently produce superior returns (or excessive profits) after adjusting for risk and transactions costs. However, in an inefficient market, opportunity may exist for exploitative purposes due to various reasons, such as, difficulty in getting access to information, costly information, irregularity in trading, lack of supervision, incomplete corporate disclosure, non-instantaneous or lags in stock price adjustments, and several others.

In terms of price efficiency, most of the academic investigations done on the KLSE indicated that it conformed to the *weak-form* efficiency⁶³. This is one of the three forms of efficiency that Fama (1970) has classified; the other two being *semi-strong* and

⁶¹ For markets to be perfectly efficient, there is a set of assumptions that need to be met. For further discussion see for example, Fama (1970), Blake (1990), Foley (1991) and Fabozzi and Modigliani (1992). Fama (1970) especially provides a comprehensive review of the early development of both the theory and empirical work on efficient capital markets.

⁶² Economic efficiency includes both *allocative* and *operational efficiencies*. While the former refers to the ability of allocating scarce resources in an optimal manner among competing ends, the latter is a situation in which the transaction costs of operating in the market (especially the broker's commission) are determined competitively.

⁶³ See Nassir, et. al. (1992).

strong forms efficiency. In other words, the security prices on the KLSE instantaneously and fully reflect all historical information and that past prices provide no information that would allow an investor to earn excess returns⁶⁴. However, it must be noted that the non-rejection of *efficient market hypothesis* (even in the weak form) does not necessarily guarantee the presence of "information-arbitrage" efficiency of share prices, let alone that of "fundamental valuation" efficiency⁶⁵. This is especially true in a speculative and volatile market like that of KLSE. Nevertheless, most of the recent market and statistical evidences have been convincing enough to claim the prevalence of a "random walk" pattern of the KLSE stock prices, implying some level of efficiency⁶⁶.

In another study on market responses and adjustments to initial public offerings, Hassan (1992) notes that the recent under-pricing of new issues has substantially reduced, compared to the last ten years. For example, the period between 1980 and 1988 saw an average initial premium - that is, the relative difference between offer price and initial listing price - of about 140%⁶⁷; however, this has substantially reduced to around 40% in the early 1990s. (Theoretically, the lesser the under-pricing, that is, the smaller the initial premium, the more mature and efficient is the market). Surprisingly, though, of the total newly issued shares registered with the Registrar of Companies during 1981 and 1990, only about 6% was taken up by Bumiputera individuals.

⁶⁴ In a *semi-strong form* environment, the security prices do not only reflect historical data, but also all publicly available information so that when any new information of companies becomes public, it is very rapidly incorporated into the prices. This is normally the characteristic of well-developed markets like the NYSE and the City (London). In a hypothetical *strong form efficiency*, it incorporates all public, private and historical information that even *insider knowledge* cannot earn abnormal profits.

⁶⁵ As Summers (1986) notes, the non-rejection of the *efficient market hypothesis* does not imply that therefore the converse must be true, that is, the data may not reject a hypothesis of *inefficient* markets in the *information-arbitrage* sense either.

⁶⁶ A "random walk" market is one where successive price changes in individual securities are independent, and that past history of the series cannot be used to predict the future in any meaningful way. For further discussion see Fama (1965).

⁶⁷ As reported by Alowi, et. al. (1993). This was one hundred times more than the returns experienced by most developed markets, and at least three times more than the Singapore's market. There have been many suggestions and efforts are underway to introduce a free pricing of shares at initial public offerings as practised in more developed markets like United States and Britain.

What is interesting to note from these points is, in the course of achieving the NEP's target of corporate ownership for the Bumiputeras, the Government has often made it mandatory for listing or issuing companies to exclusively allocate about 30% of any new issues for the Bumiputera applicants. This is apart from the substantial allocation granted to the community through the Government's special issues of its numerous privatised companies. Thus, in essence, if all these equity offers were taken up since the early 1980s (especially when the initial premiums were significantly high) and held on to date, the target of 30% equity-ownership would have probably been achieved. Whether this implies a short-termism characteristic of the Bumiputera investors or preference to other forms of investment, remains unanswered. It would appear that most of them participated in the market for short-term capital gains; however, this is understandable considering the low dividend yields of most of the listed companies⁶⁸.

4.8 Summary

Following the discussion in earlier chapters on the Malaysian economy and its broad financial system, this chapter narrows the scope by focusing on the three main segments of the country's capital market : the Malaysian Government Securities market, the Private Debt Securities market and the Kuala Lumpur stock market. The aims were not only to examine the progress and structural changes that have taken place in these markets, but more importantly, to evaluate their potentials (particularly the stock market) in realising the Government NEP's target of acquiring 30% of corporate equity ownership for the Bumiputera community.

⁶⁸ The dividend yields of almost all the listed companies have often not been able to even cover the cost of inflation, let alone match the interest rates. Currently none of the Second Board companies have posted dividend yields of more than 3% and only three of the Main Board companies have dividend yields higher than the prevailing interest rates. Source : Malaysian Business, January 16, 1995.

Indeed, considering the immense growth of the KLSE between the years 1970 and 1994, and numerous policy measures taken by the Government to promote Bumiputera participation in the equity market, it remains perplexing to appreciate the failure of the community to achieve the target. There appears to be an insignificant number of Bumiputera investors (who are largely Muslims), relative to the non-Bumiputeras, participating in the stock market. Our earlier hypothesis was to suggest (among others), the community's religious adherence to Islamic *Shari'ah* as one of the possible factors that could have hindered them from indulging in share trading. This is because some of the conservative Muslim scholars have still maintained that the practice of share trading is Islamically illegitimate, especially when it involves speculative trading, short-selling and contra-transactions. Though it is sometimes difficult to justify the rationales of these transactions from the premise of strict Islamic *fiqh* (jurisprudence), many other modern scholars have allowed them. Hence, in enabling us to offer evidences in a later chapter, to refute (or otherwise) the claims made, we have elaborated the functions, nature of trading and detailed operations of the KLSE.

The chapter began by describing the development of the capital market in terms of its size, market capitalisation, market depth, breadth and resilience. For example, in the early 1970s, when the New Economic Policy (NEP) was introduced, there were only about 150 Malaysian-incorporated companies listed on the KLSE, mobilising a mere RM76 million (£19 million) of funds. By the end of 1994, the size of funds raised in the capital market had increased to RM17 billion (£4.25 billion). The market capitalisation of the stock market rose to RM509 billion (£127.3 billion), almost three times the size of the country's GNP. In terms of size, this has placed the bourse to be the largest in South-East Asia and one of the most active trading exchanges in the region. Despite the market's volatility and its relatively high P/E ratios, studies have shown that it conforms to the characteristics of a weak-form efficiency. This implies that the security prices on

the KLSE instantaneously and fully reflect all historical information and that past prices provide no information that would allow an investor to earn excess returns.

We also noted the numerous issues of Islamic-based investment instruments, introduced by both the Government and the private sector in recent years. Among others, this include the interest-free Government investment certificate, the *Al-Mudharabah* bonds and Islamic notes. However, in analysing the responses from the corporate sector and the impact these instruments have on the financial system, we noticed that the volume of funds mobilised through the issuance of these instruments were relatively insignificant when compared to the established conventional institutions. This shows that the process of developing an alternative Islamic financial system does not end with the issuance of Islamic instruments or establishment of Islamic financial institutions alone. Much of the success in realising the system depends on its ability to offer competitive returns, attractive investment incentives, appealing and innovative products and services, and most importantly, the ability to draw meaningful responses from both the public and the corporate sector.

Based on the small response (especially from the Muslims themselves) toward the issuance of Islamic instruments, one might ponder whether it would make any difference even if the stock market were to be considered as Islamically legitimate. Hence, we believe that the reason for having low participation of Bumiputeras in the stock market goes beyond religious adherence.

With such an enormous potential that remains to be tapped from a fast-growing economy like Malaysia, where more than 50% of the population are Muslims, it will be interesting and indeed justified to analyse the characteristics and involvement of the Muslim investors in the capital market. There is a need to appraise the problems and issues clouding them, and to analyse the factors that impede their economic developments. Are the problems associated with culture, investment attitude, economic

attitudes or religious beliefs? Do the problems lie with the players, the market, the instruments or the policies? These are the pertinent issues that we hope to answer when analysing the data gathered from the field research in later chapters.

Meanwhile, in the next chapter we shall conduct an equity structure analysis of the Malaysian stock market, examining the distribution of shareholders by portfolio size, market value, nationality, ethnic groups and others. We shall also explore the development of the unit trust industry, especially the Bumiputera Unit Trust and the National Unit Trust, both of which were established exclusively for the Bumiputera community to enhance their equity participation in the capital market.

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CHAPTER 5

AN ANALYSIS OF THE BUMIPUTERA EQUITY PARTICIPATION IN THE MALAYSIAN CAPITAL MARKET

5.1 Introduction

In the course of appraising the development and structural changes of the Malaysian capital market in the previous chapter, we have noted the untapped potentials for enhancing the mobilisation of investible resources, particularly in the equity market of the corporate sector. Indeed, the prospects for the Bumiputera community to increase their equity ownership are currently better than in the early years of development, especially in the wake of a continuous reduction in the proportion of foreign equity participation¹. Their prospects were further enhanced by the introduction of an extensive privatisation policy in the mid-1980s. The programme ensures that Bumiputera interests remain the major beneficiaries of privatised projects. In many cases, the Government has accorded majority shares of even up to one hundred per cent ownership of the privatised companies to the Bumiputera's corporations, institutions and trust agencies with the objective of securing an increased participation of the community in the Chinese-dominated corporate sector.

Nevertheless, as mentioned earlier, despite this potential and a plethora of policy measures designed by the Government to improve the economic situation of the Bumiputeras, the target of achieving 30% share of the country's corporate assets (under

¹ The foreign equity ownership has declined from 63.3% in 1970 to 25.4% in 1990. However, between 1990-92, there was substantial divestments of the Bumiputera shareholdings to both the foreigners and the non-Bumiputeras, thereby increasing the former's share to 32.4% at year end 1992. At the same time, the Chinese share of corporate wealth rose from 27.2% in 1970 to almost 46% in 1990 before declining to 37.8% as at end of 1992.

the *New Economic Policy*, NEP, 1971-90) for the community is yet to materialise. Upon the expiry of the NEP, the Government introduced a ten-year Second Outline Perspective Plan (1991-2000) which embodies a new *National Development Policy* (NDP). The latter attempts to build upon the on-going thrust of the expired NEP in eradicating poverty and restructuring society with the objective of redressing the country's economic imbalances. Thus, the policies encompass the critical aspect of achieving a more balanced ethnic distribution, by promoting a fair and more equitable sharing in the benefits of the country's economic growth.

To achieve these ends, various steps were taken such as the setting up of several Bumiputera trust agencies at both the federal and state levels so as to intensify efforts in mobilising Bumiputera savings. The most significant of these establishments was the *Permodalan Nasional Berhad* (National Equity Corporation) founded in 1978, a wholly-owned subsidiary of the *Yayasan Pelaburan Bumiputera* (Bumiputera Investment Foundation), which was entrusted with the responsibility of acquiring equity on behalf of the community. This was effected through its unit trust schemes, namely, the *Amanah Saham Nasional* (National Unit Trust) and *Amanah Saham Bumiputera* (Bumiputera Unit Trust). Other efforts include the establishment of the Bumiputera Stock Exchange which only lists public limited companies whose shares are owned by the Bumiputera community. In addition, several investment trust funds, special loan schemes and exclusive business councils were created to promote Bumiputera participation in the commercial and industrial sectors. Apart from fostering national unity, the long term goal was ostensibly to create a level playing field among all Malaysians so as to generate a healthy and fair competition in the market, in pursuit of economic wealth. When this is achieved, the special privileges accorded the Bumiputera are expected to be withdrawn.

However, during the mid-term review of the Sixth Malaysia Plan (1990-95), it was noted that, while the total equity in the corporate sector increased by about 10% per

annum between 1990 and 1992, the Bumiputera ownership of share capital in fact reduced by one per cent to about 18.2% at the end of 1992. Bumiputera ownership of privatised entities has also dropped considerably. There were large divestments of Bumiputera holdings in assets and shares, estimated at more than RM860 million (£215 million) during the period. The dilution was even more substantial in public listed companies with total divestments amounting to RM1.8 billion (£0.45 billion) at par value or RM18.5 billion (£4.6 billion) at 1992's market price². At the end of 1994, the estimated Bumiputera's corporate equity holdings had only increased marginally to about 20.3%, far short of the targeted level of 30%.

In discussing our research hypothesis in the first chapter, we offered several possible reasons to explain the prevailing phenomenon of having low Bumiputera participation and ownerships in the capital market. Among others, these include, firstly, the short-termism and risk-averse attitudes of the Bumiputera investors and secondly, the Islamic religious beliefs of the community, (who are largely Muslims) who compare stock market investment to gambling in a casino, which is not permissible under Islamic law. However, based on the insignificant responses (as seen earlier) from the existing Muslim savers and investors toward the issue of Islamic-based investment instruments within the Islamic banking system, this initial response to the reason of religious adherence is suspect. While the analysis of the field study in later chapters will attempt to explore these issues, the Government has often ascribed the problems to the "get-rich quick" and short-termism attitudes of the Bumiputera community³. In short, there is a desire for short term gains but preferably without risk taking.

In reviewing Bumiputera participation in the economy, the Government had at one time indicated that, *"unless and until Bumiputeras cultivate the habit of retaining*

² See Mid-term Review of the Sixth Malaysia Plan (1991-95).

³ See The Second Outline Perspective Plan (1991-2000) and the Mid-term Review of the Sixth Malaysia Plan (1991-95).

their wealth or reinvesting their earnings from the ownership of their wealth, the objective of at least 30% stake in the corporate sector will never be achieved"⁴. Indeed, the growing availability of resources transferred to the group presents an excellent opportunity for them to plough back into productive and constructive activities. In fact, if all the Bumiputera equity at the time of privatisation is taken into account, Bumiputera ownership of privatised entities (excluding Government holdings) today would amount to at least 69% of total equity. At the end of 1994, Bumiputera investors (including the trust agencies) formed only 17.3% of the total shareholders on the Kuala Lumpur Stock Exchange, holding 31.8% of the total equity or paid-up capital.

In an effort to restrain the Bumiputera investors from liquidating their stake and diluting their equity-holdings, the authorities have been promoting change from the current structure of (domestic) retail-investor base in the stock market to that of an institutional-investor base. This will then reduce the existing large proportion of retail investors whose objective has often been to achieve high returns in a short period⁵. In comparison, the institutional investors such as the unit trust funds are professionally managed, and designed for long term investors at above average returns with lower risks. It is thought that the presence of more institutional investors in the market will also boost stability and confidence in the marketplace. This is because the fund manager's disciplined and value based approach distinguishes them from speculative buying sprees and panic selling of the retail investors.

This chapter attempts to conduct an analysis of the Bumiputera equity participation in the Malaysian corporate sector, focusing on the community's encouragement to mobilise their savings through institutions such as the unit trust funds

⁴ See the Prime Minister's Parliamentary address on the Mid-term Review of the Sixth Malaysia Plan.

⁵ At the end of 1994, individual investors on the Kuala Lumpur stock exchange made up more than 95% of total shareholders acquiring a mere 17.7% of the total equity. Although the Bumiputera held about 32% of the equity, most of the holdings were acquired by the trust agencies and other related institutions.

for investment purposes. The objective is to explore the achievements of the Bumiputeras in enhancing their proportion of equity capital in the corporate sector. At the same time, we also seek to analyse some issues challenging the community in their efforts to achieve the desired goal of acquiring 30% share of capital ownership. The chapter comprises six sections. Section two discusses the development of Bumiputera's involvement in the corporate sector. Section three explores the community's equity participation in unit trust funds. This is followed by section four which conducts an analysis of the equity distribution of public listed companies on the Kuala Lumpur Stock Exchange. Section five examines more general issues on wealth and income distribution and finally, section six concludes the chapter.

5.2 Development of Bumiputera Participation in the Corporate Sector

Consonant with the growth and development in the economy, there have been notable achievements by the Bumiputera, particularly in relation to ownership of shares of limited companies in the corporate sector. The community has increased its participation in this sector considerably from 2.3% in 1970 to an estimated 20.3% at the end of 1994. This has generally been achieved through the holdings of shares by trust agencies supported by the Government through a plethora of economic policies and development incentives.

5.2.1 Framework and Policies for Bumiputera Participation⁶

During the First Outline Perspective Plan, covering the period 1971-90, the Government has implemented four Five-year development plans⁷. These development

⁶ Sourced from various Government publications including the Sixth Malaysia Plan (1991-95), Second Outline Perspective Plan (1991-2000) and Mid-term Review of the Sixth Malaysia Plan (1991-95).

⁷ These cover from the Second Malaysia Plan (1971-75) to the Fifth Malaysia Plan (1986-90).

plans were implemented within the framework of the New Economic Policy which was introduced in 1970, after the racial riots in 1969, to promote growth with equity. The emphasis on Bumiputera participation and shareholding in the corporate sector became important after the introduction of the NEP, a 20-year programme that was aimed at eradicating poverty and restructuring society to eliminate the identification of race with economic function. The approach was to restructure the Malaysian economy towards a more equitable distribution of income and wealth among the various races, with the objective of fostering national unity. Thus, the policy proposed the distribution of at least 30% Bumiputera ownership of Malaysia's corporate cake within the life-span of the NEP, with the non-Bumiputeras controlling 40%, and foreigners the remaining 30%⁸.

Upon the expiry of the NEP, the Government appeared to acknowledge that this emphasis on the redistribution of wealth had (in some ways) hindered the development of the economy. The Second Outline Perspective Plan (OPP2), 1991-2000, was then formulated which in turn embodies the National Development Policy (NDP). Since the problem of ethnic imbalances have not been completely eliminated, the policy aims to continue with the strategy of restructuring society, especially with the objective of increasing meaningful participation of Bumiputera community in the modern sectors of the economy. However, changes were made in the method of implementing this strategy, taking into account the strength and weaknesses of previous approaches. In this regard, specific numerical targets for the redistribution of equities among ethnic groups (such as in the NEP) were no more defined. Instead, the policy aims to improve the capacity of the Bumiputera to generate income and create wealth as well as to provide the appropriate skills for them to effectively retain and manage their wealth.

⁸ Recall that the population comprises 62% Bumiputera and 38% non-Bumiputera (made up of 29% Chinese, 8% Indian and 1% others).

The NDP thus gives more emphasis to human resource development programmes for the Bumiputeras, especially in education, training and the inculcation of more business orientated values. These are regarded as fundamental requirements for achieving the objectives of growth and distribution. Nevertheless, until such time as a sufficient pool of more viable enterprises, and competitive and resilient Bumiputera entrepreneurs has been created, the Government efforts in providing direct assistance, credit facilities, and special privileges for the Bumiputeras are expected to continue⁹. In essence, though specific targets and timeframes were abandoned in the NDP, the underlying objective of acquiring a sizeable ownership of corporate share capital for the Bumiputeras survived.

In order to facilitate progress towards these ends, measures have been undertaken through the privatisation programme to allocate a substantial proportion of the equity in the privatised projects to the Bumiputera. The Government also supported the creation of a Bumiputera Commercial and Industrial Community (BCIC) through the allocation of contracts, quotas and licences for Bumiputera businesses and joint ventures. The allocation have been designed for projects that will promote Bumiputera participation in the commercial and industrial activities, especially in entrepreneurial, managerial and skill development.

As part of the overall programme to assist their businesses to turn around, the Government created special funds and institutions such as the Entrepreneur Rehabilitation Fund, the Bumiputera Industrial Fund, the Credit Guarantee Corporation, the New Entrepreneur Fund and many others to offer financial and technical support. In addition, the privatisation of commercial enterprises under Government trust agencies have also been exclusively reserved for the Bumiputeras¹⁰. Apart from the objective of

⁹ Though the policy did cause a certain amount of resentment among the non-Bumiputeras, notably the Chinese community, the policy makers has regarded it as a form of positive discrimination.

¹⁰ These include agencies such as MARA (Council of Trust for Indigenous People), PERNAS (National Corporation) and several State Economic Development Corporations (SEDC).

promoting a private-sector led growth, the privatisation programme was implemented as a vehicle to provide expanding opportunities for the creation of new equity capital for Bumiputera ownership. This was hoped to make up for the shortfall in their equity ownership in other sectors. An important consideration in the privatisation programme was the need to ensure that they will continue to hold their interests in the privatised entities.

The result of these measures has been an increase in the number of establishments owned and operated by Bumiputera and the creation of a new pool of Bumiputera entrepreneurs, especially among the Muslim Malays. However, relative to the other communities, their share is still insignificant. In many business and commercial sectors, their participation is well below that of the non-Bumiputeras. This is generally due to their lack of capital and managerial expertise, hence the focus on human resource development in the NDP.

5.2.2 Bumiputera Ownership of Corporate Share Capital

5.2.2.1 Trend of Equity Ownership During NEP Period

With respect to the restructuring of corporate share capital under the First Outline Perspective Plan (1971-90), the target was to increase Bumiputera share ownership from 2.4% in 1970 to at least 30% in 1990. In order to attain the desired target, Bumiputera share ownership needed to grow by about 13.5% per annum for twenty years. Based on the various policies and development plans set out for the community, its share of ownership was then projected to expand at a rapid rate of 30% per annum compared with 14.5% estimated for the total equity in the corporate sector. The equity shares of other Malaysians and foreigners were projected to grow moderately by 15.4% and 10.3% per annum, respectively.

However, at the end of 1990, the total equity ownership of the Bumiputera (individuals, institutions and trust agencies) has only increased to 19.2%, a growth of about 11% per annum during the period. In the mean time, the non-Bumiputera holdings expanded from 32.3% in 1970 to 46.8% in 1990, exceeding the target set for them. Within this group, the Chinese have increased their share to 45.5%, while the Indians maintained about 1% and others 0.3%. The share of equity registered under nominee companies has also increased from 2.0% to 8.5% at the end of the period. On the other hand, the share of foreign ownership declined from 63.3% to 25.1%, thus, more than fulfilling the NEP target of reducing their control to 30%. Table 5.1 below shows the growth and development of ownership of share capital (at par value) of limited companies between 1970 and 1992¹¹.

Notice from the figures in table 5.1, although the achievement of the Bumiputeras at the end of 1990 was below target, the increase in its equity ownership in absolute terms was significantly large. Their total shareholdings in absolute value, increased from RM125.6 million (£31.4 million) in 1970 to almost RM20.9 billion (£5.2 billion) in 1990. This represents a growth of about 29% per annum (for twenty years), which is substantially higher than the growth of 16.3% (from RM5.3 million to RM108.4 billion) for the corporate sector as a whole. The increase in Bumiputera equity was mainly attributed to the holdings acquired by the trust agencies and other related institutions which held RM11.9 billion (£3 billion) or 11% of the equities. Bumiputera direct investors accounted for the remaining RM9 billion (£2.25 billion) which represented about 8.3% of the total share capital of RM108.4 billion (£27.1 billion). Meanwhile, records from the Registrar of Companies showed that, of the total newly issued shares registered with the office during 1981-90, only about 6% was taken up by Bumiputera individuals. Hence, without the acquisition of the trust agencies, the Bumiputera proportion of the equity would have been much smaller.

¹¹ Note that this is the latest Government official data in print available at the time of writing. Also note that limited companies comprise all privately owned as well as public listed and unlisted companies.

Table 5.1
Ownership of Share Capital (at Par Value) of Limited Companies in Malaysia
between 1970 and 1992

Year	1970		1980		1985		1990		1992	
Ownership Group	RM Billion	%	RM Billion	%	RM Billion	%	RM Billion	%	RM Billion	%
Bumiputera	0.12	2.4	4.05	12.5	14.88	19.1	20.88	19.2	23.73	18.2
Individuals & Institutions ¹	0.08	1.6	1.88	5.8	9.10	11.7	15.32	14.1	20.78	15.9
Trust Agencies ²	0.04	0.8	2.17	6.7	5.78	7.4	5.56	5.1	2.95	2.3
Non-Bumiputera	1.72	32.3	14.44	44.6 ³	27.95	35.9	50.75	46.8	52.33	40.0
Chinese	1.66	31.3	n.a. ⁴	n.a.	26.03	33.4	49.29	45.5	49.48	37.8
Indians	0.06	1.0	n.a.	n.a.	0.93	1.2	1.07	1.0	1.39	1.1
Others	-	-	n.a.	n.a.	0.99	1.3	0.39	0.3	1.46	1.1
Nominee Companies	0.11	2.0	n.a.	n.a.	14.83	19.0	9.22	8.5	12.47	9.5
Foreigners	3.38	63.3	13.93	42.9	20.30	26.0	27.53	25.4	42.37	32.4
Total :	5.33	100.0	32.42	100.0	77.96	100.0	108.38	100.0	130.91	100.0

Notes : ¹Includes institutions channelling Bumiputera funds such as the National Unit Trust, Bumiputera Unit Trust, MARA Unit Trust, Muslim Pilgrim's Management and Fund Board, and Armed Forces Provident Fund.
²Shares held through institutions classified as trust agencies such as the National Equity Corporation, National Corporation and State Economic Development Corporations. It also includes the amount of equity owned by the Government through other agencies and companies which have been identified under the Transfer Scheme of Government Equity to Bumiputera.
³Includes shares held through nominee companies.
⁴Not available.

Sources : Mid-term Review of the Sixth Malaysia Plan (1991-95) and Jomo (1990).

5.2.2.2 Trend of Equity Ownership During Post-NEP Period

The trend and development of Bumiputera equity ownership from 1970 to 1992 shown in table 5.1, indicated a rapid rate of growth in the 1970s and early 1980s. Between 1970 and 1975, the ratio increased almost four-fold from 2.4% to 9.2%; it grew further to 12.5% in 1980, before receding to 19.1% by 1985. Since the recession in the mid-1980s, the rate of growth of Bumiputera equity ownership has slowed down considerably due to their limited resources. There was also a substantial reduction in the

activities of the trust agencies. In addition, as part of the policy adjustments undertaken (during the recession) to revive the private sector and stimulate growth, several policy guidelines were relaxed including those on equity ownership among ethnic groups. As a consequence, between 1985 and 1992, the ratio maintained at an average of about 19% before increasing marginally to 20.3% at the end of 1994¹².

After the recovery in the late 1980s, there was a strong performance by the economy which provided opportunities for the creation of new corporate wealth¹³. The total share capital of limited companies (at par value) in the corporate sector increased from RM108.4 billion (£27.1 billion) in 1990 to RM130.9 billion (£32.7 billion) as at end of 1992. Although Bumiputera corporate equity recorded a growth of 13.7% in absolute value between 1990 and 1992, (increasing to RM23.7 billion or £5.9 billion), its share of total equity in fact declined from 19.2% to 18.2%. This was due to a significant amount of divestment (RM863.8 million or £216 million) that took place during the period.

A similar trend was also evident in the equity structure of listed companies on the Kuala Lumpur Stock Exchange (KLSE). Of the new companies that were listed on the KLSE during 1990-92, Bumiputera equity holdings declined from 41.4% at the time of their listings to 29% in 1993, with a total divestment of RM950.5 million (£237.6 million) at par value. If we were to include the substantial dilution that took place in large companies listed prior to 1990, the total divestments amounted to RM1.8 billion (£0.45 billion) at par value, equivalent to more than RM18.5 billion (£4.6 billion) at current market value¹⁴. Had this amount been retained, the total Bumiputera ownership

¹² This figure was not shown in the table because the breakdown of equity holdings for the other group of investors were not available at the time of writing.

¹³ See Chapter 2 for detailed explanation on the development of the Malaysian economy.

¹⁴ See Mid-term Review of the Sixth Malaysia Plan (1991-95).

of corporate equity at the end of 1994 would have been at least 22% if not more¹⁵ (instead of the current 20.3%).

Of the amount under Bumiputera ownership in 1992, RM13.5 billion (£3.4 billion) or 57% were held by individual investors, while the institutions and the trust agencies held about 30.7% and 12.3% respectively¹⁶. The increase in holdings by individuals and institutions was mainly attributed to the transfer of certain holdings of trust agencies to them as well as the allocation of shares reserved for Bumiputera in public listed companies¹⁷. Nevertheless, in terms of control of companies (measured on the basis of at least 51% equity ownership), the Bumiputera only controlled 16% of the total number of companies as at end of 1992; and of these, about 40% had total equity of less than RM10,000 (£2,500). This reflects the extreme skewness in the distribution of company-sizes among the various communities. With respect to sectoral participation, although their shareholdings of public listed companies seemed to show concentration in the industrials and plantation sectors¹⁸, the spread in the corporate sector as a whole was 27% in the finance sector¹⁹, 25% in wholesale and retail trade, 12% in construction, with the remaining 36% distributed in other sectors.

¹⁵ This is if we were to consider the same growth rate of 6.6% between 1992-94.

¹⁶ These are institutions designed specifically to mobilise Bumiputera funds for equity investments. Among others, they include the National Unit Trust, Bumiputera Unit Trust, MARA Unit Trust, Muslim Pilgrim's Management and Fund Board, and Armed Forces Provident Fund.

¹⁷ See Mid-term Review of the Sixth Malaysia Plan (1991-95).

¹⁸ See table 5.8 below.

¹⁹ It is interesting to note that a large proportion appears to be in the finance sector. This is an important point to consider, especially after raising some issues in the previous chapter with regard to : firstly, the insignificant response toward the Islamic banking system from the Muslims (who are largely Bumiputeras); and secondly, whether religious adherence had any influence in determining their nature and pattern of investment.

5.3 Bumiputera Equity Participation in Unit Trust Funds

In order to create a more meaningful and effective participation of the Bumiputera in the corporate sector, the Government established several unit trust funds and agencies, specifically meant for the community. A unit trust is a cost-effective trust fund which pools funds together from investors so that investment can be made on an economic scale in the securities market²⁰. The advantage of unit trust is that investors with a small amount of savings (prominent among the Bumiputeras), may enjoy the benefits of diversification, professional management of investments and portfolio selection. Investors also have a higher chance of obtaining a better yield and capital appreciation than investing on their own.

Among the earliest trust funds established by the Government to assist the Bumiputera community in its equity participation, was the *MARA*²¹ Unit Trust in 1968. It was entrusted with the responsibility of mobilising Bumiputera household savings for equity investment in the corporate sector. However, the agency has not been successful enough due to managerial problems and accumulated losses in its investments. At the end of 1993, after 25 years in operation, the MARA Unit Trust was managing 14 Funds with an aggregate market value of only RM179 million (£44.8 million). The total number of units in circulation was a mere 79 million held by about 34,000 Bumiputera unitholders. Over the years, investors have been redeeming their units resulting in a diminishing volume of both units and unitholders.

²⁰ See Money and Banking in Malaysia (1994). Note the difference between open-ended unit-trust and close-ended investment trust. The latter are companies which are established to invest in the shares of other companies; its share price is determined by the supply and demand of the shares on the stock market. Unit trust prices, on the other hand, are determined by the underlying value of the assets in the trust.

²¹ MARA is an acronym for Majlis Amanah Rakyat meaning Council of Trust for Indigenous People.

There was then a pressing need to accelerate and sustain Bumiputera ownership and control of the corporate sector so as to meet the aims of the NEP. In early 1978, the Government introduced the *Yayasan Pelaburan Bumiputera* (Bumiputera Investment Foundation), a company limited by guarantee, which in turn established the *Permodalan Nasional Berhad* (National Equity Corporation or PNB), to spearhead its efforts of intensifying mobilisation of Bumiputera savings. In essence, the main function of the PNB is to acquire a sound portfolio of shares of those limited companies with good potential. These include companies that intend to allocate a certain proportion of their shares to the Bumiputeras, in compliance with the NEP. As an investment company, the PNB acts as a "custodian" for the fund managers, with the shares acquired being eventually transferred to its various unit trust funds and sold to the Bumiputera individuals in the form of units.

Among the main sources of the PNB's investment portfolios include, the Government shares acquired through "the scheme of transfer of shares" from Government agencies to the Bumiputera community, provisions and allocations of shares from various ministries, direct investment from institutions, the stock market and other sources. In the early stages, the process involved the transfer of Government shares from 40 companies to the PNB with a total value of RM947 million (£236.8 million)²². With these initial assets, the PNB then mobilised Bumiputera individuals' savings through its unit trust schemes, namely, the *Amanah Saham Nasional* (National Unit Trust or ASN), *Amanah Saham Bumiputera* (Bumiputera Unit Trust or ASB) and the *Amanah Harta Tanah* (PNB's Property Trust). In this manner, the PNB would enable the Bumiputera community to own shares in major Malaysian corporations.

²² See Permodalan Nasional Berhad (1992). In fact, some Bumiputera companies (e.g. PERNAS) and statutory bodies (e.g. SEDCs) were compelled to sell part of their portfolios at book value to the PNB, resulting in these companies reporting substantial losses for the year. (See also Mehmet : 1986).

Table 5.2
Investment Portfolio of National Equity Corporation (PNB)
between 1991 and 1994

Sectors	1991 (%)	1992 (%)	1993 (%)	1994 (%)
Industrials	41	44	57	55
Plantation	25	11	5	16
Mining	1	6	6	3
Properties	16	6	6	10
Finance	17	33	26	16
Total %	100	100	100	100
Total Investment (in RM Million)	3,667	4,637	4,172	6,675

Source : Permodalan Nasional Berhad, Annual Report (various issues).

During 1994 alone, the PNB invested RM2.2 billion (£0.55 billion) in shares, property unit trusts, loan stocks, and transferable subscription rights in 82 companies. These were acquired through various means, which include, investment from the stock market (25%), allocation of shares by the Ministry of Trade and Industry (9%)²³, allocation of shares by the Ministry of Finance (13%), subscriptions to various rights issues (16%) and the remaining (37%) from institutions and other sources. At the end of 1994, the PNB's total investment portfolio accounted for RM6.68 billion (£1.67 billion), spread over the major sectors in the economy²⁴. Table 5.2 above indicates the investment portfolio of the corporation between 1991 and 1994. Noticed that throughout the years a substantial proportion of the investments involved the finance sector. As we shall see in the following section, despite all the promotional exercise done by various agencies to promote Bumiputera participation in the unit trust schemes, the response has not been encouraging. Whether the investments of the PNB and its unit trust funds in the interest-based financial sector has been a major factor deterring potential (Bumiputera Muslim) investors from participating, remains debatable.

²³ As at June 1992, the allocation of the Ministry alone to the Bumiputera community through the PNB totalled RM2.5 billion (£0.63 billion) which represented almost 25% of the PNB's Group portfolio.

²⁴ See Permodalan Nasional Berhad Annual Report (1994).

5.3.1 The ASN and ASB Unit Trust Schemes

In order to manage the unit trust schemes, the PNB established a Trust Fund Management company (hereinafter referred as the *Managers*). While the PNB serves as the investment arm of the Bumiputera Investment Foundation, the *Managers* play the marketing role by managing and mobilising Bumiputera savings through both the National Unit Trust scheme (ASN) and the Bumiputera Unit Trust scheme (ASB).

The ASN²⁵ was introduced in 1981 with two main objectives, firstly, to enhance the private individual savings of the Bumiputeras, and secondly, to channel these savings for investment so as to increase the community's ownership of corporate equity. Unlike the conventional unit trusts whose prices vary according to the market-value of its underlying assets, the ASN was designed as a fixed price savings instrument with an equity link. The price of the unit was fixed at RM1.00 (£0.25) a unit and redemption was guaranteed at its par value regardless of any fluctuation in the funds net asset value. There is no transaction costs in buying or selling the units which can be made at post-offices throughout the country. In addition, returns on investment in the form of annual dividends and periodic bonus units were also tax-exempted up to RM5000 (£1250). In short, it offers one of the most attractive instruments for investment available in the country, with its unique features of tax-free dividends, no risk of capital loss and receiving full support from the Government²⁶.

This innovation was warranted by the underlying socio-economic objective of the scheme whose target audience was largely made up of less-educated, risk-averse and rural-based Bumiputeras. The community's risk-aversion attitude was clearly demonstrated in a survey conducted by the *Managers* in 1981, which revealed that

²⁵ The scheme was only meant for adult Bumiputera above 18 years old.

²⁶ However, whether this type of instrument can be regarded as a unit trust in the conventional sense is open to debate.

79.2% of Bumiputera savings were in unproductive forms such as cash (56.9%) and jewellery (22.3%), while only 7.7% was invested in stocks and shares²⁷. In order to attract a broad base of participants (especially those from low income groups), participation in the scheme requires a minimum of only RM10 (£2.50) which entitled the unitholder to a 100 trust units - the difference of 90 units being advanced by the PNB to be repaid by future dividends and bonuses. The strategy was to encourage the Bumiputera investors to sustain and increase their holdings of units. Additional investment could be made at par value to a maximum of 50,000 units.

Since 1991, the ASN has been transformed into a market-related unit trust scheme with the objective of gradually exposing the Bumiputera community to the investment-risk concept and sophistication of the growing capital market in the country²⁸. However, in order to sustain the broad base risk-averse investors, the *Managers* introduced another scheme, the Bumiputera Unit Trust (ASB), which maintains all the features of the earlier ASN prior to its transformation²⁹. In short, the ASB took over the ASN's fixed-pricing format while the ASN converts to a market-based variable pricing system, with the possibility of capital gains and losses.

²⁷ See Ibrahim (1993) and Permodalan Nasional Berhad (1981).

²⁸ In other words, since then, ASN has been converted into a conventional unit trust with transactions no longer at fixed prices. Its price is currently based on the daily market value of its investments, quoted on the Kuala Lumpur Stock Exchange. Apart from wanting to educate the Bumiputeras to be less risk-averse, the conversion was among the policies adopted when the scheme was launched a decade earlier.

²⁹ In addition, the scheme increased its maximum allowable investment to 100,000 units at RM1 (£0.25) each and also reduce the age limit of Bumiputera participants to include youths from 12 years of age. The latter will invest in a special Youth Account with a maximum limit of 10,000 units, to distinguish it from the Adult Account. In order to streamline the two unit trust schemes, ASN's limit was also increased to 100,000 units as of March 1994.

5.3.2 An Analysis of the ASN and ASB Schemes

Within the first ten years of operation, participation in the ASN has grown at an average annual rate of 11.4%. The total number of unitholders increased from 841,000 in 1981 to 2.47 million in 1990, holding a total of 11.4 billion investment units, valued at RM10.8 billion (£2.7 billion). The net investment of these unitholders also increased from RM375 million (£93.8 million) to more than RM8.5 billion (£2.13 billion) over the same period. This has overshadowed the size of all other existing funds in the country, and represented 93% of the total fund size of the unit trust industry in 1990.

However, when the ASN scheme was transformed to a market-based pricing system in 1991, most of the unitholders transferred their investment units from ASN to the ASB scheme. As a result, the ASN was left with only 2.8 billion units, the remaining 8.6 billion units having been channelled to the ASB scheme. The move reflected two possibilities, that is, either it characterised the dominant risk-averse attitude of the Bumiputera investors, or it was indeed a rational move due to the (almost) risk-free high-return nature of the ASB scheme. In other words, the objective of exposing and educating the Bumiputera investors to be more risk-preference, by transforming the ASN scheme to be variable price unit trust, was self-defeating.

In addition, what is more interesting to note is the fact that, despite the various attractive features of both these unit trust schemes, especially with their high dividends and bonus payouts, total responses from the Bumiputera community has not been encouraging. For instance, as at end of 1994, about 50% of eligible Bumiputera investors have invested in the ASB while the response for ASN has been much lower, recording only 19.7%. Three possible reasons could be offered to explain the situation; firstly, low-incomes (hence, the priority of current consumption and obligations); secondly, alternative investment preferences (such as houses and land); and thirdly,

Islamic religious objections due to the involvement of these schemes with interest-bearing financial institutions³⁰.

To overcome the problem of low income, the Government has (since 1992) allocated RM700 million (£175 million) as interest-free loans to the poorest in the Bumiputera community to enable them to participate in the ASB scheme. This has created about 140,000 new unitholders as recipients of the loans. Further, considering that the schemes only require a minimum of RM10 (£2.50) to obtain 100 units, the issue of "not affordable" should not arise. This led us to believe the presence of other reasons, which we shall explore in greater detail when analysing the field survey in later chapters. Meanwhile, we shall examine further the roles played by the ASN and the ASB in mobilising the savings of Bumiputera individuals to enhance the corporate equity ownership of the community.

5.3.2.1 Growth of Unitholders and Mobilisation of Savings

Within a span of 14 years (between 1981 and 1994), the two unit trust schemes have managed to mobilise accumulated funds of RM17.9 billion (£4.5 billion) from the Bumiputera community, recording an average annual growth rate of almost 32%. The market value of these funds as at end of 1994 was RM29.2 billion (£7.3 billion)³¹. Based on the total volume of new savings in table 5.3, it shows that the schemes have been able to mobilise an average of about RM1.28 billion (£0.32 billion) every year since 1981. Apart from enhancing the Bumiputera funds for investment in the corporate sector, the schemes have also contributed significantly to the domestic private savings in the economy. For instance, during the period of the Fifth Malaysia Plan (1986-90), the

³⁰ See section 5.5.3 below and Appendix B on income distribution of the Bumiputeras. Also see chapter 8 that analyses the perceptions and behavioural patterns of Bumiputera Muslim investors. Notice that even those with middle-level income may not necessarily have a high propensity to save or invest if the level of household disposal income remains low.

³¹ See Bank Negara Malaysia, Annual Report (1994).

two schemes have mobilised a total of RM6.8 billion (£1.7 billion) of new savings, which represented 7.1% of gross private savings, 9.5% of total household savings and 15.8% of voluntary household savings. On average, the savings accounted for about 7.6% of gross private savings over the last ten years.

Table 5.3
Growth and Development of ASN and ASB Schemes between 1981 and 1994

Year	1981	1985	1990	1991	1992	1993	1994
Number of Unit Holders : (Million)							
ASN Scheme	0.841	2.054	2.467	1.310	1.312	1.337	1.315
ASB Scheme ¹	-	-	0.120	2.960	3.281	3.541	3.940
Total Unit holders :	0.841	2.054	2.587	4.270	4.593	4.878	5.255
Funds Mobilised : (in RM Billion)							
ASN Scheme	0.375	2.358	8.505	1.667	1.013	0.594	0.598
ASB Scheme ¹	-	-	0.648	9.459	11.403	13.460	17.301
Total Funds Mobilised :	0.375	2.358	9.153	11.126	12.416	14.054	17.899
New Savings Raised as % of GPS ²	n.a. ³	6.3	13.4	9.8	4.7	5.9	11.9

Notes : ¹The ASB Scheme was launched and began operation in 1990.

²GPS refers to Gross Private Savings.

³Not available.

Sources : Perbadanan Nasional Berhad, Annual Report (various issues) and Khalid (1993).

Meanwhile, the number of Bumiputera individuals participating in both the schemes has also increased significantly from 841,000 in 1981 to 5.3 million at the end of 1994, suggesting an annual growth rate of 11.7%. This is indeed an achievement, especially when compared with the previous experience of the MARA Unit Trust Fund. Indeed, the growth and expansion of the ASN and ASB schemes have made them the largest unit trust funds in the country.

At the end of 1994, there was a total of 51 unit trust funds managed by 19 companies with a total volume of 25.1 billion units in circulation held by 6.2 million

investors. The aggregate market value of these funds was RM35.9 billion (£9 billion). Of these, the ASN and ASB schemes collectively, accounted for 71.3% of the total units in circulation, 84.8% of unitholders and 81.3% of the total market value of the unit trust funds. Nevertheless, the unit trust industry made up only about 7% of the total market capitalisation of equities, implying that the two schemes represented a mere 5.7% of the value. However, their involvement in the capital market has contributed between 15-20% of the Bumiputera share's of corporate equity ownership.

5.3.2.2 Profiles of Unitholders and Investment Portfolios

At the end of 1994, there were 3.94 million and 1.31 million investors participating in the ASB and ASN schemes respectively. This represented about 50% of the eligible Bumiputera investors for the ASB and 19.7% for the ASN schemes. We believe that, had the proportion of participants been higher, the achievement of equity acquisition for the Bumiputera's corporate ownership could have been greater than the existing 20.3%. Next, we shall explore the profiles of the participants with their respective investment values, and secondly, evaluate the unit trust funds investment portfolios.

Table 5.4 below shows the profiles of both the ASN and ASB unitholders or savers according to their professions as at end of December 1994. Notice the large difference in the number of savers between the more risky market-based ASN scheme (with 1.31 million savers), relative to the less risky fixed-pricing ASB scheme (with 3.94 million savers). Nevertheless, apart from the number of savers and the amount of savings mobilised, there were several common features between them, especially in terms of savings distribution and proportion of savers in the respective groups. For instance, a high degree of skewness seemed to appear (in both the schemes) in the proportion of savers and savings size between the management and executive groups,

relative to the others. This reflects the concentration of wealth and equity ownership even among the Bumiputera community³².

Table 5.4
Profiles of ASN and ASB Unitholders (Savers) According to Profession
as at 31st. December 1994

Profession	ASN SCHEME			ASB SCHEME		
	No. of Savers (%)	Percent of Eligible Savers ²	Size of Savings (RM Million) (%)	No. of Savers (%)	Percent of Eligible Savers ²	Size of Savings (RM Million) (%)
Management and Executive Groups	36,756 (2.80)	16.26	133.88 (22.39)	84,832 (2.15)	37.53	2,043.63 (11.81)
Clerical	118,051 (8.98)	31.23	82.23 (13.75)	346,921 (8.81)	91.79	2,893.37 (16.72)
Teachers	49,972 (3.80)	30.31	51.06 (8.54)	132,054 (3.35)	80.10	1,432.45 (8.28)
Armed Forces and Police	119,817 (9.11)	39.46	31.05 (5.19)	220,086 (5.59)	72.48	1,111.66 (6.43)
Labourers, Farmers & Fishermen	426,329 (32.43)	17.70	81.47 (13.62)	1,138,079 (28.89)	47.22	3,332.50 (19.26)
Businessmen and Self-Employed	102,509 (7.80)	22.34	51.36 (8.59)	302,967 (7.69)	66.05	1,301.33 (7.52)
Housewives	194,373 (14.78)	11.26	75.86 (12.68)	574,610 (14.59)	33.30	2,308.40 (13.34)
Others ¹	266,980 (20.31)	26.71	91.18 (15.24)	1,140,023 (28.94)	51.27	2,877.30 (16.63)
Total :	1,314,787 (100.0)	19.72 (6.67M)	598.07 (100.0)	3,939,572 (100.0)	49.92 (7.89M)	17,300.64 (100.0)

Notes : ¹These include pensioners, students, plantation settlers, unemployed and others.

²This refers to the proportion of savers from the total eligible numbers of each respective group. For example, out of 377,954 eligible savers from the clerical group, only 118,051 or 31.23% participated in the ASN scheme.

³The figures (in Million) refer to the total number of eligible savers in the respective schemes.

Source : Perbadanan Nasional Berhad, Annual Report (1994).

³²This issue of intra-community gap in wealth and equity ownerships among the Bumiputeras will be discussed when conducting the survey analysis in a later chapter.

Notice that in the ASN scheme, although the top-level management group made up only 2.8% of the total savers, it managed to secure almost 22.4% of the total size of investment at the end of the period. This was even larger than the total investment of all the labourers, farmers, fishermen, small-businessmen and self-employed groups put together; though the latter (as a group) represented more than 40% of the savers, they only maintained a mere 22.2% of the investment. The same situation appeared in the ASB scheme, albeit on a smaller margin.

Further, in analysing the profile of the schemes according to the size of the respective unitholdings across the board, we found that the concentration of net value of investment among a small group of unitholders has been more pronounced. For instance, under the ASB scheme in 1994, of the 3.94 million investors, about 34,000 or 0.86% of the unitholders had a net value of investment worth RM3.98 billion (£1 billion) which represented more than 23% of the total investment mobilised in the scheme. In contrast, there were 1.8 million or 45% of the unitholders holding only RM71.8 million (£18 million) or 0.4% of the total fund. Hereagain, a similar situation arose in the ASN scheme where 0.05% of the investors were holding about 11% of the total unit trust fund.

In terms of investment portfolio, as at end of 1994, the ASB had invested RM16.1 billion (£4 billion) in 69 companies, of which 42 companies were listed on the Kuala Lumpur Stock Exchange. Of the RM16.1 billion (£4 billion), more than 40% was invested in the industrial sector, 20% in the plantation sector, 28% in the finance sector and the remaining 12% in others. On the other hand, the ASN had a smaller investment value of RM1.1 billion (£0.3 billion) with 57% being invested in the industrial and utility sectors, 10% in the finance sector, and 33% in cash and other sectors. The schemes have also been paying very high dividends and bonuses regularly. On average, the ASN has managed to pay about 10.25% dividends (excluding bonuses) annually

throughout its 14 years of operation³³. Likewise, the ASB scheme has also been paying high dividends and bonuses at an average annual rate of 13.13%.

Note the large percentage of investment in the finance sector in both the ASB and ASN portfolios. This sector has been known to contribute among the highest rate of return from the trust fund's investment portfolio. Some observers believe the investment in this sector has been the main factor contributing to the low participation of Bumiputera (Muslim) investors. The argument was substantiated by showing the relatively small proportion of eligible savers from the (presumably more educated and critical) top-level management groups³⁴. (See table 5.4). Nevertheless, others claimed that to have been able to attract about 50% participation should already be considered very successful.

5.3.3 Other Muslim Savings Institutions³⁵

Apart from the various unit trust agencies established³⁶, particular attention was also given to institutions like the Armed Forces Provident Fund and the Muslim Pilgrim's Management and Fund Board (in short, *Tabung Haji*). These institutions have also been participating in corporate restructuring activities by directly investing in the capital market. Tabung Haji was established in 1969 to promote and co-ordinate activities connected with Muslims going on pilgrimage. It manages a fund derived mainly from the accumulation of savings of intending pilgrims and organises the

³³ Indeed, this was very much higher than the commercial banks annual fixed deposit rate of about 7.8% between 1981-94. In fact, the ASN has been known to provide the highest average annualised rate of return in the country throughout the period.

³⁴ The argument is debatable because it could also reflect their preference of selecting other forms of investment with higher risk-return complexion.

³⁵ Detailed discussion of these institutions is beyond the scope of our study.

³⁶ These include unit trust funds which were launched at the state's level, such as the Johor Unit Trust (ASJ), the Sarawak Unit Trust (ASSAR) and several others.

pilgrimage for Muslims. Although it provides Islamic means of mobilising savings and investment returns on an interest-free basis³⁷, it did not function as a banking institution. Apart from its welfare services, Tabung Haji's main objectives include enabling Muslims to save gradually in order to provide for their pilgrimage expenses. In the process, it also offers good opportunities for the funds mobilised to be invested in the industrial and commercial sectors. In this way, it would also contribute towards enhancing Bumiputera Muslims equity participation in the corporate sector. By the end of 1994, Tabung Haji had managed to mobilise total deposits of RM2.3 billion (£0.6 billion) from 2.54 million depositors, more than Bank Islam's savings deposits of RM0.42 billion (£0.11 billion) as at end of the same year³⁸. This indicates the Muslims' savings potential in Malaysia, especially when it is motivated by a religious objective. A substantial proportion of these funds have been invested in *Islamically-acceptable companies* listed on the stock market, while the balance has been through equity ownership of plantation companies, real estate holdings and others³⁹. Due to its well-diversified portfolio and high investment returns, it has managed to pay an average dividends of about 7% between 1981 and 1989⁴⁰.

Meanwhile, the contributor's account in the Armed Forces Fund recorded an accumulated deposit of RM2.7 billion (£0.7 billion) from more than 97,000 contributors. In addition, efforts were also being made to improve the management and use of resources generated by Islamic-based institutions, especially those relating to the *Zakat* (Muslim's tithe) fund, the *Wakaf* (Community trust) fund and the *Baitulmal*

³⁷ In this regard, Tabung Haji has often been considered to be the first Islamic (non-bank) financial institution to have been established in Malaysia.

³⁸ However, Bank Islam Malaysia only began its operation in 1983, about 14 years after Tabung Haji's establishment. The amount of RM2.3 billion was almost equivalent to the investment and savings deposits of the Bank, excluding its demand deposits of RM0.58 billion.

³⁹ See next chapter for discussion of Islamically-acceptable companies. Latest figures of Tabung Haji's investment portfolio are not available; however in 1988, its investments included holding shares of manufacturing companies (59%), plantations (19%), real estate (11%) and others (11%).

⁴⁰ See Ibrahim (1993).

(Muslim's treasury)⁴¹. The main objective was to ensure that the various socio-economic programmes undertaken by these institutions were more effectively integrated and streamlined with the national planning effort for the Bumiputera Muslims community.

5.4 Equity Structure Analysis of Public Listed Companies on the KLSE

Having discussed the Bumiputera equity participation in the unit trust industry, we shall next analyse the equity structure of public limited companies that were listed on the Kuala Lumpur Stock Exchange (KLSE) between 1990 and 1994. The aim is to explore the growth and development of Bumiputera investors' participation in the capital market by examining their size of shareholdings and the portfolio size of investment across various sectors of the Exchange. This will illustrate the untapped potential of the community to enhance further its equity investment in the capital market. For instance, as at end of 1994, the Bumiputera constituted only 17% of the total number of 2.88 million investors, holding 31.8% of total equity in the stock market. The remaining 83% of investors were made up of the non-Bumiputeras and foreigners, accounting for 68.2% or almost RM46 billion (£11.5 billion) of the equity value.

Given that the two unit trust schemes, the ASN and ASB, accounted for only 5.7% of the stock market capitalisation,⁴² and given the Government's equity restructuring policy, the room for the community to increase its present 20.3% proportion of share capital ownership in the corporate sector remains large. Prior to analysing the Bumiputera's portfolio of investment, we shall firstly examine the

⁴¹ See The Second Outline Perspective Plan (1991-2000).

⁴² Recall that the market capitalisation of the KLSE as at end of 1994 was RM508.9 billion (£127.23 billion).

distribution of equity amongst the shareholders according to the portfolio size of shareholdings, the type of investors and the nationality of investors.

5.4.1 Equity Distribution by Portfolio Size

Table 5.5 on the following page shows the breakdown of equity holdings among the Malaysian and foreign investors according to various portfolio sizes. Notice the increasing number of Malaysian shareholders from 1.29 million in 1990 to 2.51 million in 1994 (which represented an annual growth rate of 18%), as compared with the foreign participants who had an average size of 310 during the same period. The total equity or paid-up capital of the companies also grew significantly at a rate of 19% per annum. The amount more than doubled from RM33.7 billion (£8.4 billion) in 1990 to RM67.5 billion (£16.9 billion) in 1994.

Throughout the five years, the category of shareholders holding 500-5000 shares represented the largest group of investors. In 1994, almost 70% of Malaysian investors fell into this category, controlling only 4.5% of total equity value. This contrasted with the "above 10,000 shares" category which accounted for 5.3% of the investors holding RM48.5 billion (£12.1 billion) or 72% of the equities. It is very probable that they represented the institutional and retail investors respectively.

It is important to take note of this distribution of shareholders with their respective portfolio sizes and equity values especially when we relate the sizes of Bumiputera holdings in a later section.

Table 5.5
Equity Distribution of Malaysian Public Listed Companies by Portfolio Size between 1990 and 1994

Portfolio Size (No. of Shares)	Year	1994		1993		1992		1991		1990	
		No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)
1 - 499	Malaysian	178.6 (6.2)	23.7 (0.0)	136.0 (6.2)	18.3 (0.0)	133.2 (6.1)	16.4 (0.0)	106.6 (5.9)	15.2 (0.0)	70.4 (4.5)	10.8 (0.0)
	Foreign	30.1 (1.0)	5.4 (0.0)	26.9 (1.2)	4.7 (0.0)	27.8 (1.3)	4.9 (0.0)	27.0 (1.5)	5.2 (0.0)	24.2 (1.6)	4.2 (0.0)
500 - 5000	Malaysian	1,983.4 (68.8)	3,019.3 (4.5)	1,449.9 (66.5)	2,146.9 (3.7)	1,501.9 (68.2)	2,191.3 (4.4)	1,157.5 (64.4)	1,702.0 (4.3)	1,027.8 (65.8)	1,481.0 (4.4)
	Foreign	218.5 (7.6)	386.6 (0.6)	187.6 (8.6)	327.2 (0.6)	172.6 (7.8)	304.7 (0.6)	170.4 (9.5)	304.4 (0.8)	162.9 (10.4)	287.5 (0.9)
5001 - 10,000	Malaysian	189.6 (6.6)	1,192.5 (1.8)	148.6 (6.8)	889.6 (1.5)	144.1 (6.5)	1,097.7 (2.2)	130.9 (7.3)	771.2 (2.0)	104.2 (6.7)	605.7 (1.8)
	Foreign	56.6 (2.0)	326.6 (0.5)	45.1 (2.1)	257.9 (0.4)	43.2 (2.0)	248.4 (0.5)	41.7 (2.3)	240.7 (0.6)	37.3 (2.4)	213.7 (0.6)
10,001 & Above	Malaysian	154.1 (5.3)	48,490.6 (71.9)	129.0 (5.9)	41,400.0 (71.6)	122.4 (5.6)	35,120.2 (70.8)	111.6 (6.2)	27,390.7 (69.4)	90.5 (5.8)	22,416.4 (66.5)
	Foreign	69.3 (2.4)	11,991.9 (17.8)	56.7 (2.6)	10,696.8 (18.5)	54.3 (2.5)	9,247.9 (18.7)	50.8 (2.8)	8,060.0 (20.4)	43.9 (2.8)	7,921.2 (23.5)
Director	Malaysian	1.6 (0.1)	1,887.6 (2.8)	1.3 (0.1)	1,931.9 (3.3)	1.1 (0.1)	1,258.5 (2.5)	0.9 (0.1)	906.2 (2.3)	0.8 (0.1)	703.7 (2.1)
	Foreign	0.1 (0.0)	139.1 (0.2)	0.1 (0.0)	109.0 (0.2)	0.1 (0.0)	84.9 (0.2)	0.1 (0.0)	74.8 (0.2)	0.1 (0.0)	53.4 (0.2)
Total :	Malaysian	2,507.3 (87.0)	54,613.7 (81.0)	1,864.9 (85.5)	46,386.8 (80.3)	1,902.8 (86.5)	39,684.1 (80.0)	1,507.5 (83.9)	30,785.3 (78.0)	1,293.8 (82.8)	25,217.6 (74.8)
	Foreign	374.6 (13.0)	12,849.7 (19.0)	316.4 (14.5)	11,395.5 (19.7)	298.0 (13.5)	9,890.9 (20.0)	290.1 (16.1)	8,685.2 (22.0)	268.5 (17.2)	8,480.1 (25.2)
Grand Total :	All Holders	2,881.9 (100.0)	67,463.4 (100.0)	2,181.3 (100.0)	57,782.3 (100.0)	2,200.8 (100.0)	49,575 (100.0)	1,797.6 (100.0)	39,470.5 (100.0)	1,562.3 (100.0)	33,697.7 (100.0)

Source : Research Department's Analysis and Reports, Kuala Lumpur Stock Exchange, (various issues).

5.4.2 Equity Distribution by Type of Investors

Table 5.6 shows the equity distribution of shareholders by four types of investors, namely, the individuals, institutions, nominees and others⁴³. Among them, individuals represented the largest group of investors, accounting for more than 95% of the shareholders during the 1990-94 period. However, this group held only 16.7% of total equity. In contrast, institutions formed only 2.3% of investors but were the largest equity owners, holding 42.9% or RM28.9 billion (£7.2 billion) worth of equity. This confirmed our earlier expectation of shareholdings distribution according to portfolio sizes.

From the two tables (5.5 and 5.6) we noted the following points for the Malaysian investors for the year ending 1994 :

(i) firstly, of the 2.5 million shareholders (representing 87% of the total number of investors), more than 2.4 million of them were individuals holding 13.3% of the total equity; at the same time, there were also 2.2 million investors who held less than 5000 shares, accounting for about 4.5% of the equity capital. This implies that a large percentage of the individual investors have only been holding no more than 5000 shares.

(ii) on the other hand, about 56,400 of the institutional investors have accounted for 37.8% of the total equity and almost all of them would have been holding more 10,000 shares in their portfolios.

⁴³ Nominees refer to shareholders holding shares on behalf of the beneficial owners for some reasons or convenience.

Table 5.6
Equity Distribution of Malaysian Public Listed Companies by Type of Investors between 1990 and 1994

Type of Investors	Nationality	1994			1993			1992			1991			1990		
		No. of Holders '000 (%)	Equity (RM Million) (%)		No. of Holders '000 (%)	Equity (RM Million) (%)		No. of Holders '000 (%)	Equity (RM Million) (%)		No. of Holders '000 (%)	Equity (RM Million) (%)		No. of Holders '000 (%)	Equity (RM Million) (%)	
Individuals	Malaysian	2,413.4 (83.7)	8,982.9 (13.3)		1,800.0 (82.2)	6,757.9 (11.7)		1,843.0 (83.7)	5,972.8 (12.0)		1,457.2 (81.1)	4,887.2 (12.4)		1,249.5 (80.0)	4,020.6 (11.9)	
	Foreign	333.2 (11.6)	2,297.6 (3.4)		2,78.6 (12.8)	1,867.7 (3.2)		262.0 (11.9)	1,675.2 (3.4)		256.6 (14.3)	1,625.4 (4.1)		237.8 (15.2)	1,372.9 (4.1)	
Institutions ¹	Malaysian	56.4 (2.0)	25,502.7 (37.8)		40.8 (1.9)	22,663.0 (39.2)		39.2 (1.8)	20,396.2 (41.1)		31.9 (1.8)	14,615.7 (37.0)		28.4 (1.8)	12,608.5 (37.4)	
	Foreign	9.4 (0.3)	3,410.4 (5.1)		8.4 (0.4)	2,916.7 (5.0)		8.1 (0.4)	2,730.5 (5.5)		7.6 (0.4)	2,470.8 (6.3)		7.3 (0.5)	2,091.7 (6.2)	
Nominees	Malaysian	35.3 (1.2)	19,355.3 (28.7)		22.3 (1.0)	16,387.2 (28.4)		18.9 (0.9)	12,776.2 (25.8)		16.7 (0.9)	10,834.8 (27.5)		14.1 (0.9)	8,213.3 (24.4)	
	Foreign	14.9 (0.5)	6,702.2 (9.9)		13.0 (0.6)	6,015.6 (10.4)		11.7 (0.5)	4,973.3 (10.0)		10.5 (0.6)	4,188.5 (10.6)		9.6 (0.6)	4,614.6 (13.7)	
Others	Malaysian	2.2 (0.1)	772.8 (1.1)		1.8 (0.1)	578.6 (1.0)		1.7 (0.1)	538.9 (1.1)		1.6 (0.1)	447.5 (1.1)		1.8 (0.1)	375.3 (1.1)	
	Foreign	17.2 (0.6)	439.6 (0.7)		16.4 (0.8)	595.5 (1.0)		16.3 (0.7)	511.8 (1.0)		15.3 (0.9)	400.5 (1.0)		13.7 (0.9)	400.9 (1.2)	
Total :	Malaysian	2,507.3 (87.0)	54,613.7 (81.0)		1,864.9 (85.5)	46,386.8 (80.3)		1,902.8 (86.5)	39,684.1 (80.0)		1,507.5 (83.9)	30,785.3 (78.0)		1,293.8 (82.8)	25,217.6 (74.8)	
	Foreign	374.6 (13.0)	12,849.7 (19.0)		316.4 (14.5)	11,395.5 (19.7)		298.0 (13.5)	9,890.9 (20.0)		290.1 (16.1)	8,685.2 (22.0)		268.5 (17.2)	8,480.1 (25.2)	
Grand Total :	All Holders	2,881.9 (100.0)	67,463.4 (100.0)		2,181.3 (100.0)	57,782.3 (100.0)		2,200.8 (100.0)	49,575.0 (100.0)		1,797.6 (100.0)	39,470.5 (100.0)		1,562.3 (100.0)	33,697.7 (100.0)	

Note : ¹ Institutions include banks, insurance and finance companies, investment houses, corporations and government agencies.

Source : Research Department's Analysis and Reports, Kuala Lumpur Stock Exchange, (various issues).

5.4.3 Equity Holding by Nationality

Table 5.7 on the following page shows the equity distribution of shareholders by nationality. Notice that at the end of 1994, there were almost 0.5 million of Bumiputera investors accounting for RM21.5 billion (£5.4 billion) or 31.8% of the total paid-up capital, increasing from 0.26 million investors and RM9.6 billion (£2.4 billion) or 28.6% in 1990, respectively. This represented an average annual growth rate of 17.2% for the number of investors and 22% in terms of equity size. Nevertheless, this was much smaller than the achievement made by the non-Bumiputeras which maintained about 69% of the total shareholders during the period, and controlled 49.1% of the equity capital at the end of 1994. The two million non-Bumiputera shareholders were more than four times that of the Bumiputeras.

Nevertheless, in comparing the size of holders and their share of equity capital between the Bumiputera and the non-Bumiputera investors, we notice the following points :

(i) firstly, the 0.5 million of Bumiputera investors were holding RM21.5 billion (£5.4 billion) of equity capital, as compared to the 2 million non-Bumiputera investors controlling RM33.1 billion (£8.3 billion) of the total equity. At the same time, since there were 2.4 million Malaysian individual investors accounting for 13.3% of the equity capital, the number of Bumiputera individual investors must have been very small relative to the non-Bumiputeras;

(ii) secondly, it also showed that a large percentage of the equity held by the Bumiputeras must have come from their institutional investors.

Table 5.7
Equity Holding of Malaysian Public Listed Companies by Nationality between 1990 and 1994

Year	1994		1993		1992		1991		1990	
	No. of Holders '000	Equity (RM Million)	No. of Holders '000	Equity (RM Million)	No. of Holders '000	Equity (RM Million)	No. of Holders '000	Equity (RM Million)	No. of Holders '000	Equity (RM Million)
	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Bumiputera	498.8 (17.3)	21,476.5 (31.8)	304.8 (14.0)	18,259.2 (31.6)	385.7 (17.5)	17,912.2 (36.1)	268.8 (15.0)	11,515.0 (29.2)	264.1 (16.9)	9,641.8 (28.6)
Non-Bumiputera	2,008.5 (69.7)	33,137.2 (49.1)	1,560.1 (71.5)	28,127.5 (48.7)	1,517.1 (68.9)	21,771.9 (43.9)	1,238.7 (68.9)	19,270.3 (48.8)	1,029.7 (65.9)	15,575.7 (46.2)
Foreigners	374.6 (13.0)	12,849.7 (19.0)	316.4 (14.5)	11,395.5 (19.7)	298.0 (13.5)	9,890.9 (20.0)	290.1 (16.1)	8,685.2 (22.0)	268.5 (17.2)	8,480.1 (25.2)
Total : (as at Dec.)	2,881.9 (100.0)	67,463.4 (100.0)	2,181.3 (100.0)	57,782.3 (100.0)	2,200.8 (100.0)	49,575.0 (100.0)	1,797.6 (100.0)	39,470.5 (100.0)	1,562.3 (100.0)	33,697.7 (100.0)

Source : Research Department's Analysis and Reports, Kuala Lumpur Stock Exchange, (various issues).

Meanwhile, although the number of the foreign shareholders have been increasing over the years, there has been a gradual reduction in their proportion of equity capital from 25.2% in 1990 to 19% in 1994.

5.4.4 Equity Structure of Bumiputera Investors

We shall now look at the Bumiputera's portfolio of investment as shown in table 5.8. The trend of investment seemed to be rather similar throughout the five years with a higher concentration on the industrials and the finance counters. Since a large percentage of Bumiputera equity capital in the stock market has been held by their institutional investors such as the National Equity Corporation (PNB) and several trust agencies, they tend to select most of the blue-chip companies that offer long-term growth and high dividend yields. Most of the remaining individual investors would generally opt for the more volatile counters usually found in the industrial products, construction, trading and service sectors.

On average, the portfolio of investment for the Bumiputeras between 1990 and 1994, was : Industrials (49.3%), Finance (13.6%), Hotels (4.2%), Property (10%), Plantations (19.2%), Mining (0.8%), Trusts (1%) and Second Board (2%). It is interesting to note that while the percentage of holders in the finance sector has been decreasing over the years (presumably shifting to the property sector), the percentage of equity capital it has held, has been on the rise. The finance sector has often been characterised by two features; firstly, it is an expensive blue chip sector and secondly, it is a long-term growth stock sector. This implies that most of the investments in the sector must have come from the institutions rather than the retail investors, hence the rising equity level.

Table 5.8
Equity Structure of Bumiputera's Investment across Sectors of Public Listed Companies between 1990 and 94

Year	1994		1993		1992		1991		1990	
	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)	No. of Holders '000 (%)	Equity (RM Million) (%)
Sectors (No. of Cos. - % of Total Equity as at Dec. '94)										
Industrials ¹ (198 - 55.3)	235.1 (47.1)	11,261.7 (52.5)	153.8 (50.4)	9,429.4 (51.7)	204.4 (53.0)	9,838.4 (54.9)	101.3 (37.7)	4,912.3 (42.7)	131.4 (49.8)	4,300.7 (44.6)
Finance (44 - 14.6)	62.3 (12.5)	3,360.4 (15.6)	43.5 (14.3)	2,513.6 (13.8)	69.5 (18.0)	1,882.2 (10.5)	68.9 (25.6)	1,715.9 (14.9)	67.6 (25.6)	1,252.4 (13.0)
Hotels (5 - 3.1)	11.8 (2.4)	670.3 (3.1)	14.6 (4.8)	719.2 (3.9)	14.0 (3.6)	836.7 (4.7)	3.6 (1.3)	699.7 (6.1)	6.4 (2.4)	320.0 (3.3)
Property (45 - 12.5)	112.4 (22.5)	2,123.5 (9.9)	38.6 (12.7)	1,922.6 (10.5)	38.3 (9.9)	1,749.6 (9.8)	22.8 (8.5)	1,185.5 (10.3)	11.4 (4.3)	939.0 (9.7)
Plantation (38 - 8.8)	30.4 (6.1)	2,942.0 (13.7)	15.9 (5.2)	2,956.0 (16.2)	16.1 (4.2)	3,090.9 (17.3)	25.5 (9.5)	2,618.6 (22.7)	13.5 (5.1)	2,498.6 (25.9)
Mining (11 - 0.9)	6.1 (1.2)	149.0 (0.7)	5.9 (1.9)	136.0 (0.7)	1.0 (0.3)	90.6 (0.5)	1.0 (0.4)	82.6 (0.7)	1.1 (0.4)	139.3 (1.4)
Trusts (3 - 0.5)	10.9 (2.2)	153.8 (0.7)	11.0 (3.6)	158.0 (0.9)	11.7 (3.0)	150.9 (0.8)	13.0 (4.8)	129.6 (1.1)	16.2 (6.1)	122.1 (1.3)
Second Board Cos. (131 - 4.2)	29.8 (6.0)	815.8 (3.8)	21.5 (7.1)	424.4 (2.3)	30.8 (8.0)	272.8 (1.5)	32.7 (12.2)	170.8 (1.5)	16.6 (6.3)	69.7 (0.7)
Total : (4752 - 100.0)	498.8 (100.0)	21,476.5 (100.0)	304.8 (100.0)	18,259.2 (100.0)	385.7 (100.0)	17,912.2 (100.0)	268.8 (100.0)	11,515.0 (100.0)	264.1 (100.0)	9,641.8 (100.0)

Notes : ¹In September 1993, companies on the Industrial Sector was reclassified into four separate counters, namely : Consumer Products, Industrial Products, Construction, and Trading and Services. To maintain comparable ratios, figures for Industrial Sector in 1993/94 are summation of these four counters.

²The analysis exclude three foreign-incorporated companies; (total companies listed as of Dec. 1994 was 478).

Sources : Research Department's Analysis and Reports, Kuala Lumpur Stock Exchange, (various issues).

Next, we shall discuss some problems and issues associated with Bumiputera equity participation in the corporate sector.

5.5 Issues in Bumiputera Equity Participation

Despite some of the notable achievements made by the Bumiputera during the implementation of the NEP, the development in the equity structure of corporate share capital up until the end of 1994 has not been encouraging. There were mixed opinions from various quarters on the failure of the NEP, particularly in relation to equity ownership in the corporate sector. Some believed there existed several dominant underlying problems inherent within the Bumiputera community that characterise their investment attitude, including insufficient capital and inadequate proficiency in creating and managing wealth⁴⁴. On the other hand, some economists have claimed that Bumiputera share ownership was much higher than suggested by the Government statistics. For example, the Bumiputera percentage of ownership disclosed did not include shares owned by those who use nominee companies and other such devices, obscuring the identity of the owners⁴⁵. Yet it is well-known that a significant proportion of such companies are owned by Bumiputeras. We shall thus explore some of these complementary arguments to shed further light on the issues.

5.5.1 Separation of Ownership and Control

According to many observers, the implementation of the NEP failed to develop resilient Bumiputera entrepreneurs. This was reflected in the fact that, until the last few years, a large percentage of Bumiputera ownership in the corporate sector was held by

⁴⁴ For example, see Ibrahim (1990 : pp. 135-138).

⁴⁵ For example, see Jomo (1989 : Chapter 2 and 1990 : Chapter 7) and Mehmet (1986 : Chapter 5).

trust agencies and not by individuals or Bumiputera companies. (See table 5.1). Ibrahim (1990) claimed that even the participation in the sector through trust agencies was not strong because most of the companies established by these agencies recorded huge operating losses for many years⁴⁶.

Apart from the lack of managerial expertise, it is felt that the problem was also associated with the concept of *trusteeship* which was chosen as the policy instrument in wealth distribution under the NEP. The concept defined a clear separation between ownership and control. Hence, while equity and portfolio control was entrusted to the trustees (who are usually politicians rather than professionals), ownership was nominally and collectively assigned to the Bumiputera community. Decision-making, including those involving investment portfolio selection, rested with management teams whose competencies were often suspect⁴⁷. There have been cases where the trustees took advantage of their privileged status, access to information and power over the decision-making. In short, it lacked the adequate accountability and professionalism deemed necessary to succeed in the corporate sector.

5.5.2 MARA and the Bumiputera Stock Exchange

The problems of mismanagement in some Bumiputera agencies in the 1970s and early 1980s have also contributed to the slow process of the community achieving its equity ownership target. For instance, *MARA* (Council of Trust for Indigenous People) was established to assist and promote greater participation by the Bumiputera community in the commercial and industrial activities of the country. Through its subsidiary, *Komplek Kewangan* (an investment holding company), it is supposed to

⁴⁶ Ibrahim was also the Group Chief Executive of the National Equity Corporation till December 1994.

⁴⁷ The policy of maintaining politicians as members of the management team is presumably in the interest of facilitating patronage by the ruling political party and for the benefits of certain interest groups. For further discussion on the social and financial costs of trusteeship, see Mehmet (1986).

spearhead Bumiputera investment programmes in the field of finance and securities so as to enhance its equity participation. However, in 1988 its total resources were reduced from RM217 million (£54.3 million) to only RM98 million (£24.5 million) due to the accumulated losses in its operations.

The Bumiputera Stock Exchange (BSE) was yet another institution to promote greater equity participation of the community that has not been able to fulfil its aims. The Exchange was in fact exclusively reserved for the listing of Bumiputera public limited companies whose shares are wholly owned by the Bumiputeras. However, the activities and development of the BSE has remained relatively modest in comparison with the Kuala Lumpur Stock Exchange. There were only a limited number of companies listed (due to it being restricted to Bumiputeras) and turnover of shares remained small. Its inactivity was attributable to the lack of market players and liquidity, unattractive trading rules (which required overnight delivery of shares) and uncompetitive brokerage fees (of 1% flat rate of the market price)⁴⁸. As a consequence, in 1993 there were only 6 companies listed on the Exchange, which recorded an insignificant trading volume of 1.3 million units at a value of RM1.5 million (£0.4 million).

5.5.3 Employment and Income Distribution

Education, employment and income distribution have also influenced Bumiputera equity participation. In order to have a meaningful participation either in equity investments or business enterprises, there needs to be a sufficient level of savings to provide an initial source of capital. However, due to the high level of poverty within the community, the participation and investment have not been effective. Although the incidence of poverty in the country has reduced substantially from 42.4% in 1976,

⁴⁸ See Money and Banking in Malaysia (1994).

17.1% in 1990 and 13.5% in 1993⁴⁹, the Bumiputera community continued to account for the highest percentage of the poor, accounting for 23.8% at the end of 1990. (See table 5.9 below).

Table 5.9
Incidence of Poverty and Mean Monthly Household Income
in Malaysia between 1976 and 1993

Incidence of Poverty (%)	1976	1990	1993
Overall	42.4	17.1	13.5
Rural	50.9	21.8	18.6
Urban	18.7	7.5	5.3
Bumiputera	56.4	23.8	n.a. ¹
Chinese	19.2	5.5	n.a.
Indians	28.5	8.0	n.a.
Others	44.6	12.9	n.a.
Mean Monthly Household Income (in RM Current Prices)			
Overall	505	1,167	1,563
Bumiputera	339	928	1,239
Chinese	796	1,631	2,195
Indians ²	537	1,201	1,577
Others	996	3,292	4,478 ³
Gini Coefficient	0.570 ⁴	0.446	0.459

Notes : ¹Not available.

²Peninsular Malaysia only.

³Estimate.

⁴The Gini coefficient in 1970 (when NEP was about to be implemented) was 0.513.

Sources : The Second Outline Perspective Plan (1991-2000), Mid-term Review of the Sixth Malaysia Plan (1991-95) and Jomo (1989).

Poverty among Bumiputeras is prevalent because they have been traditionally engaged in the agricultural sector at subsistence level and in low income job categories⁵⁰. Despite the increase in mean monthly gross household income in Malaysia between 1990 and 1993, the community recorded the lowest monthly income of RM1239 (£310) at the end of the period. As a result of the differential rates of income

⁴⁹ The estimation for 1995 was 8.8%. Source : Mid-term Review of the Sixth Malaysia Plan (1991-95).

⁵⁰ Despite the progress made in eradicating poverty, the problem remains concentrated within the traditional primary sectors and in the rural areas. Since the Bumiputera are predominant in these areas, the incidence of poverty among them continues to remain high.

growth among the various ethnic groups, the Gini coefficient increased to 0.459 at the end of 1993. To compound the problem further, there is also a rising trend of intra-ethnic income inequality among the Bumiputeras⁵¹.

Apart from the problems of low income and poverty, Bumiputera participation in the corporate sector also depends on the development of the community's managerial expertise and professionalism to sustain and strengthen the level and quality of investment. These can only be obtained through education, training, business exposure and employment restructuring⁵². At the end of 1993, the Bumiputera share of employment at the administrative and managerial levels was only 32.5%.

5.5.4 Short-termism in Bumiputera Equity Investment

As seen earlier, divestment among the Bumiputera investors in the capital market is a common phenomenon. It would appear that most investors get into the stock market for short-term capital gains rather than long-term growth and dividend yields. Equity ownership with Government allocation and assistance alone, will have little impact on promoting effective Bumiputera participation if the newly acquired wealth is not retained and enlarged. The efforts to increase Bumiputera shareholdings through the privatisation exercise has also not achieved its desired objective. For example, total market capitalisation of fifteen privatised companies over the years, increased from RM29.9 billion (£7.5 billion) at offer price to RM117.3 billion (£29.3 billion),

⁵¹ The distribution of household income between 1983-92 shown in Appendix B, among the Bumiputera Malays and non-Bumiputera Chinese, provides a general indication of wealth distribution in the country. For a more detailed discussion on employment, income distribution and inequality, growth and equity, see Bhalla and Homi Kharas (1992), Jomo (1990), Jomo and Ishak Shari (1986), and Snodgrass (1980).

⁵² The issue of low income jobs among the Bumiputeras has also prompted the Government to restructure employment in the various sectors so as to reflect the ethnic composition at all occupational levels, especially in the professional and managerial categories. In addition, the PNB as major shareholders of some of these companies, has also ensured that qualified Bumiputeras are given an opportunity to participate in the management of the companies.

accounting for 22% of total market capitalisation as at February 1994⁵³. Much of the Bumiputera's share was soon liquidated for their current consumption.

The problems seemed to be associated with two other issues, namely, low dividend yields and an inappropriate pricing strategy in the initial public offerings of shares. As mentioned in the previous chapter, Malaysian companies have been known not to declare good dividends to their shareholders. The dividend yields of practically all of the companies have often not been able to even cover the cost of inflation, let alone match the interest rates. Thus the capital gains have been more attractive to the investors especially among the low income Bumiputeras. The situation is compounded further by the large domestic retail investors that dominate the volume of trading in the stock market. As a consequence, the market is very susceptible to rumours that in turn caused wide fluctuations in share prices. The Kuala Lumpur Stock Exchange (KLSE) might be better driven by local institutional funds such as the unit trusts and the insurance funds which could buffer the volatility and extreme price fluctuations in the market.

Secondly, the adoption of an inappropriate pricing strategy in the issue of new shares in the KLSE has accentuated speculative activity and induced quick turnover among investors. At present, the pricing of initial public offerings (IPOs) is based on a merit system, vetted by the Securities Commission, rather than on a free pricing market system. The Commission is guided by proposals from the underwriters and pre-set price-earnings multiple to determine the issuing price. In addition, due to the on-going equity restructuring policy, prices have often been set artificially low so as to make them affordable to the Bumiputera investors. As a consequence, the initial excess returns (premiums) after listings were very high, tempting the successful Bumiputera subscribers to liquidate their positions almost immediately⁵⁴. In short, the aim is to

⁵³ See Sawal (1994).

⁵⁴ Perhaps the situation is best described by looking at the number of times the IPOs of privatised companies (with substantial allocation for the Bumiputeras) have been oversubscribed. This is a strong indicator that the offer prices have been very much undervalued and did not reflect the prevailing market

make short-term gains at the expense of long-term share capital ownership. A review of this pricing strategy such as the employment of an open tender system (as practiced in Singapore) is necessary to overcome the problem and minimise speculative activity in the stock market.

5.5.5 Other Issues

In addressing the issue of the Bumiputera's shortfall in acquiring the 30% target of equity ownership of share capital, some observers felt that the problems discussed above have been exaggerated so as to justify the authorities continuing support for the Bumiputeras. Critics claimed that it was quite likely for the Bumiputera's proportion to have exceeded their actual share of wealth. Two related issues of nominee companies and market share prices, follow.

5.5.5.1 Nominee Companies

The argument focused on the usage of "Nominee Companies" as one of the ownership groups without its identity being disclosed. Conversely, all such shares are considered as belonging to non-Bumiputeras or foreign residents when in fact, they are more likely to be owned by the Bumiputera individuals. However, even if we assume this to be true, the highest percentage of ownership that the Bumiputera could attain (after summing up the nominee companies portion) at the end of 1992, would only be 27.7% (See table 5.1).

condition. For example, the listings of PETRONAS DAGANGAN (a petroleum company) and HICOM (Heavy Industries Corporation) in 1994 were oversubscribed 27.3 and 25.6 times respectively. For further discussion on IPOs, see Ho (1995), Hassan (1992) and Thillainathan (1988).

5.5.5.2 Market vs. Par Values

Due to the various Government guidelines on corporate restructuring, most of the Bumiputera share ownership (through its trust agencies) tends to be concentrated in the larger and more successful firms. Hence, Jomo (1989) suggested that the estimation of wealth distribution in equity ownership needed to consider using share market values, rather than nominal (par) values. This will offer a more realistic guide to the community's equity proportion. If this measure is applied, it is possible that the 30% target could have already been achieved.

5.6 Conclusion

Following the discussion in the previous chapter on the development of the capital market, this chapter attempted to analyse the Bumiputera equity participation in the Malaysian corporate sector. The objective was to explore the development and achievements of the Bumiputeras in their efforts to enhance their proportion of equity capital in the corporate sector. At the same time, we have also highlighted some challenging issues facing the community that are thought to have contributed to its failure to achieve the 30% target of share capital ownership.

The chapter began by offering some probable reasons which might explain the low participation of the Bumiputeras in the capital market. Among others, these included firstly, the short-termism and risk-averse attitudes of the Bumiputera investors and secondly, the Islamic religious beliefs of the community that viewed stock market investment as gambling in a casino. However, the Government seemed to ascribe the problems to the "get-rich quick" and short-termism attitudes of the Bumiputera community. In discussing the development of Bumiputera involvement in the corporate sector, we described the policies designed by the Government to encourage the

community to participate in the commercial and industrial activities of the country. The aim of the Government was to redress the economic imbalances that prevailed among the various ethnic groups.

The result of these measures has been an increase in the number of establishments owned and operated by Bumiputera and the creation of a new pool of Bumiputera entrepreneurs, especially among the Muslim Malays. However, relative to the other communities, their share is still insignificant. In analysing the trend of equity ownership held by the Bumiputeras in the corporate sector, it was apparent that there was a significant amount of divestment that has taken place over the years, confirming the problem of short-termism in the community.

In order to overcome the problem, and create a more meaningful and effective participation of the Bumiputera in the corporate sector, the Government established several unit trust funds and agencies, specifically meant for the community. The participation in terms of savings volume has been encouraging, though the percentage of eligible participants was less than 50% at the end of 1994. Next we conducted an analysis of the equity distribution of public listed companies on the Kuala Lumpur Stock Exchange and noted the insignificant size of the Bumiputera individual investors. Most of the holdings were held by institutions like the PNB and the unit trust funds especially the ASN and the ASB. The extent to which share ownership is discouraged by religious beliefs, low incomes or risk-averse attitude of the community must remain debatable. The analysis of the field study in later chapters will attempt to explore these issues.

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CHAPTER 6

ECONOMIC JUSTIFICATION AND SHARI'AH CONSIDERATIONS ON THE STOCK MARKET

6.1 Introduction

In a famous passage of *The General Theory*, Keynes (1936) observed :

"As the organisation of investment markets improves, the risk of the predominance of speculation does, however, increase. In one of the greatest investment markets in the world, namely, New York, the influence of speculation (in the above sense, i.e. *the activity of forecasting the psychology of the market*) is enormous.Speculators may do no harm as bubbles on a steady stream of enterprise. But the position is serious when enterprise becomes the bubbles on a whirlpool of speculation. When the capital development of a country becomes a by-product of the activities of a casino, the job is likely to be ill-done. The measure of success attained by Wall Street, regarded as an institution of which the proper social purpose is to direct new investment into the most profitable channels in terms of future yield, cannot be claimed as one of the outstanding triumphs of *laissez-faire* capitalism"¹ .

Notwithstanding Keynes' scepticism about the virtues of the stock market in relation to a country's investment needs, the present, almost universal enthusiasm for developing and expanding the stock markets has been sweeping the globe at a pace faster than ever experienced. As part of a general trend towards liberalisation, deregulation, privatisation, diminution of the role of the state, and enhancement of the market, an important feature of the development of the financial sector in a large number of developing economies (including Malaysia), is the very fast growth of stock markets in these countries. The establishment and expansion of these markets is

¹ For detailed discussion see Keynes (1936 : Chapter 12, pp. 158-159). It must be borne in mind, however, that *The General Theory* was written in the aftermath of the 1929 stock market crash and the world-wide recession that followed it.

favoured not just by *the South*, but also by many of the centrally planned economies. At a time when economic growth rates are the criteria for judging competition among nations and at a time when the attainment of a continuous rise in living conditions of all individuals has become the goal sought by all communities, capital markets have gained considerable importance.

The benefits of having a well-developed capital market cannot be over-emphasised. These financial intermediary institutions are tools that seek to achieve the highest level of economic efficiency through optimal allocation of limited financial resources from the surplus to deficit units. Apart from enabling corporations to raise equity capital, the market allows both inter and intra-sectoral competition among instruments of various institutions of the financial system, based on each investor's risk, return and time considerations. Its functions complement those of the banking system and non-bank financial intermediaries such as the insurance companies, building societies, and similar organisations. The existence of a stock exchange as an active secondary market is very important because it provides liquidity for investors and helps to stimulate growth and development of the primary market, and hence the economy. Many studies have shown that the presence of a well-developed stock market influences or stimulates economic growth².

The basic role of a stock market is to provide a forum for buyers and sellers to conduct business transactions in shares, bonds and different types of securities of companies. The activities of buying and selling these securities are extremely important for the efficient allocation of capital within economies. Nevertheless, the benefits of the capital markets are not without cost. Price distortions, market rigging, unfounded speculation, insider trading, ineffective regulation, inefficient information dissemination, and loss of local ownership are but some of the problems that developing

²For examples, see Tarumizu (1992), Jung (1986) and, Norton and Lynch (1992).

economies must be prepared to accept and face in establishing the stock markets. In one study, Kitchen (1986) noted that capital markets which are inefficient could even exacerbate inequalities in the distribution of wealth and income in an economy. If this were to happen to Malaysia, it would bring about negative repercussions to the Government's social engineering policies of redressing the economic balance among communities, through equitable share ownership distribution.

Some critics have questioned the relevance of the present-day form of the securities market especially when it involves the trading of financial derivatives (such as options, futures, swaps, etc.) which have mostly been used for hedging purposes and, are often detached from real economic activities. Stock markets seem to have reached a stage which reflects a complete departure from their original aims of providing crucial financial intermediation in economies. In emerging markets where speculative activities are rife, changes of share prices of companies are often unpredictable, so much so that *fundamental analysis*³ becomes a futile effort. The prices are subjected to such a complex web of (sometimes unrelated) factors that more often than not, the market values of companies are found neither to reflect their underlying assets nor the net present value of their potential future streams of earnings. In short, investment of shares in these markets, especially among small individual investors (like the Bumiputera Muslims in Malaysia), are presumed to be nothing more than playing a game of chance and dabbling in an uncertain business venture. Those critics observed that this could possibly explain the frugality of the Bumiputera community's share investment and equity ownership.

In Islam, the general principles of fair trading in the market and the need to be unambiguous in a business transaction have been spelled out at various instances both in

³ Analysis of security values based on firm's financial statements information such as earnings, dividend payout, growth, balance sheet variables, management quality, economic outlook and numerous other variables. It attempts to determine the true value of a security and take advantage of any differences between the value and the market price by either buying or selling the stock.

the *Holy Quran* and the *Sunnah*⁴. Most Muslim scholars⁵ share common opinions on the significant roles and importance of establishing the stock market in a modern economy. In fact, in so far as the institution promotes *participatory financing*, it conforms closely with the principles of Islamic economy which encourages profit and loss sharing investment⁶. The Muslim jurists contend that all economic activities, save those prohibited by the *Shari'ah*, are permissible under Islam. The particular aspect of co-operation in a business venture in the form of equity ownership (such as investment in stocks), is considered important and in line with the *Sunnah* of the Prophet Muhammad (pbuh).

While the trading of shares of (Islamically acceptable) companies may be considered legitimate, the Islamic *Shari'ah* strictly prohibits any forms of gambling, *gharar* sales (literally meaning uncertainty or ambiguous sales), and other speculative contracts with the potential of bringing about disputes. It is for this reason that most Muslim scholars have considered *short-selling* transactions as illegitimate on the premise of selling/trading in something that one does not possess, hence involving *gharar* or uncertainty (often leading to fraud, exploitation and injustice). However, some Muslims in Malaysia have gone further by rejecting stock market investment based on the following arguments : (i) firstly, the market in Kuala Lumpur has been extremely speculative, susceptible to rumours, ambiguity and inefficiency such that share prices did not reflect the underlying fundamental economic or accounting values of the companies; (ii) secondly, apart from the unit trusts, investment in shares involves a lot of uncertainties, uncontrollable market manipulation, market rigging, and chance which is akin to gambling. In our opinion, although gambling is indeed forbidden in

⁴ Literally meaning the sayings and exemplary behaviour of the Prophet (peace be upon him, hereafter, pbuh). It forms the second principal source of the Islamic *Shari'ah*. The recorded narratives and reports of his deeds and sayings are referred to as the *Hadith*.

⁵ For examples, see El-Gari (1993), Khan (1988), Qureshi (1988), Zaman (1986), and Metwally (1984).

⁶ See Wilson (1995, 1993, 1991, 1990).

Islam, it is essential to distinguish the difference between gambling, risk-taking, uncertainty or *gharar* in investment activities. We shall return to define each of these terms a little later.

Meanwhile, in the last four chapters, we have attempted to highlight issues concerning the inequitable distribution of share capital ownership among the various communities in Malaysia, and the low investment participation of Bumiputera Muslims in the Malaysian capital market. We examined these issues after relating the impressive growth and development of the country's economy and its financial system, along with the many policy reforms and measures taken by the Government to enhance the community's equity ownership to thirty percent. Earlier, among the many possible reasons offered to explain the prevailing phenomenon was the *Islamic religious convictions* of the Bumiputera Muslims who likened stock market investment with gambling in a casino. However, this reason is suspect because of several factors that have been discussed in the previous chapters⁷. Nevertheless, as we shall see in the analysis of the field study later on, there are reasons to believe that Islamic consciousness does influence the level of Bumiputera Muslims participation in the stock market. Hence the matter could not simply be dismissed without exploring the Islamic jurisprudence of investing in the stock market.

Indeed, there are competing *Shari'ah* views on the legitimacy of some aspects of stock market investment. Apart from justifying the economic functions and necessity of the stock market in a modern economy, this chapter attempts to discuss the various opinions of some Muslim scholars and jurists on the limits and permissibility for the Muslims to participate in the stock market. It aims to shed light and offer some prescriptions, guidelines, as well as conclusive evidence in support of equity investment

⁷ For instance, we felt that the Bumiputera Muslims were reluctant to adopt *Shari'ah* means of investment or savings especially if they found them materially less advantageous compared with the conventional financial practices.

by the Bumiputera Muslims on the Kuala Lumpur Stock Exchange. The chapter comprises eight sections. Section two discusses the relationship between economic growth and capital market development. This is followed by section three which explores the costs and benefits of developing the stock market. Section four examines some critical issues often raised by observers and commentators who had reservations about developing countries promoting the stock market. From section five onwards, the opinions of *Shari'ah* injunctions on the stock market are examined, starting with a brief outline of Islam, the *Shari'ah* and the general principles of market regulation in Islam. Sections six and seven discuss the opinions and views of several Muslim jurists and scholars on the Islamic jurisprudence (*fiqh*) of financial transactions. Section eight concludes the chapter.

6.2 Economic Growth and Capital Market Development

It has been generally recognised that the development of capital markets, especially among developing countries, is fundamental in promoting economic growth⁸. An efficient and well-developed capital market provides an effective means of mobilising savings and channelling financial resources for productive investment activities. The financial system which comprises the markets, institutions and instruments facilitate the efficient production of goods and services, thereby contributing to the society's well-being and a rising standard of living. Economic growth will be hampered if there is a shortage of funds for worthwhile investments, or if allocation of the limited funds are not conducted optimally. Thus, the capital market also encourages entrepreneurs to improve the efficiency of investments.

⁸ See Henning, et. al. (1988).

6.2.1 Theoretical Literature on Capital Market Development

Traditional economic and monetary theory has given financial development (in particular, capital market development) a very limited importance in comparison to other variables in the process of furthering economic growth⁹. Indeed, the study of the role of money and finance in economic development has been a fairly recent phenomenon. Although the financial literature in developed countries discusses quite thoroughly the theory, process and economic consequences of financial and securities markets, much less attention has been given to the development of these markets in developing countries. This is because securities markets are considered part of the later stages in the financial development of a country¹⁰.

Keynes (1936) gave some importance to the role of financial development by relating equilibrium in the money markets to general equilibrium in the economy. However, the Keynesians, in using the static equilibrium model did not give importance to the study of imperfect or under-developed financial markets. The neo-classicists, as did the Keynesians, treated money and finance as insignificant or neutral over all countries. Schumpeter (1954) was among the first to study the importance of financial development and financial intermediaries with economic development. He regarded banks and entrepreneurship as two key agents and discussed the importance of money capital in fostering development. Friend (1967) suggested that the stock market affects the functioning of the economy in two principal ways : firstly, through its influence on the aggregate propensities to consume, save and invest; and secondly, through an improved allocation of investible funds. Goldsmith (1969) went further by providing

⁹ Strategies for economic development have traditionally emphasised large foreign-aid transfers, external debts or subsidies from other nations. Although well intended, these transfers have often been insufficient, ineffective and sometimes damaging to the recipients' fundamental economic problems. See Sudweeks (1989 : Chp. 1).

¹⁰ Some of the first to discuss securities markets in developing countries were Wai and Patrick (1973). Others include Drake (1977) and Dickie (1981).

empirical evidence of a positive relationship between the ratio of financial institutions' assets to the growth of an economy's gross national product.

It was not until the early 1970s, beginning with the seminal works by McKinnon (1973) and Shaw (1973) that economists began active research into the importance of financial development in generating economic growth, especially in developing countries. Consequently, there arose such theories as financial repression, financial deepening and financial liberalisation. What followed were suggestions and emphasis by many studies and organisations, such as the World Bank, to liberalise the banking system and promote the development of financial institutions. However, Cho (1986) argued that in the absence of a well-functioning equity market, full scale liberalisation of the banking sector would not achieve efficient capital allocation; in fact, he believes that substantial development of an equity market is a necessary condition for complete financial liberalisation. This is because although the liberalisation theory states the importance of eliminating interest rate ceilings and fostering competition among banks, it has failed to consider internal constraints such as imperfect information on the credit markets. Moreover, it has also failed to note the oligopolistic and cartelised banking systems found in most developing countries.

In short, if financial markets are composed only of debt financing institutions such as banks, they will not achieve efficient allocation of capital due to the shortcomings of debt finance in the presence of asymmetric or imperfect information¹¹. In a more recent analysis on a sample of developing countries, including Malaysia, Demirguc-Kant (1992) revealed that bank finance and equity finance are in fact complementary, as companies' borrowing capacity rises with stock market development.

¹¹ These constraints can be a significant barrier to efficient credit allocation even when external constraints, such as interest rate ceilings, are eliminated. Most of the credit rationing literature has modelled these internal constraints to explain rationing in competitive credit markets. For example, Stiglitz and Weiss (1981) suggest that given several group of borrowers, imperfect information results in some being excluded from the credit market, although the expected returns of the projects may be higher than those that get credit.

As reported by Alowi (et. al., 1993), studies by Norton and Lynch (1992) and Tarumizu (1992) also supported earlier findings that the existence of a well-developed securities or stock market will bring about a more effective mobilisation of savings, an efficient allocation of funds, wider distribution of risks, and facilitates and improve information dissemination, all of which influence economic growth.

6.2.2 Role of the Stock Market in Promoting Economic Growth

A stock market, as part of the capital market, performs a number of important economic and financial functions. Collectively, they are mechanisms which facilitate the transfer of investible funds from economic agents in financial surplus to those in financial deficit. This is achieved through the sales of securities (stocks, shares or bonds) in either the primary market or organised secondary markets, to those with surplus funds. As a result, companies in the private sector, governments, local authorities, and others have access to a larger pool of capital than would be available if they had to rely exclusively on internally-generated funds.

The activities of buying and selling these securities are extremely important for the efficient allocation of capital within economies¹². Although most of the business on the stock market consists of dealing in existing (secondary) securities, the prices of these securities provide important signals to the financial institutions. Companies whose share prices are at a premium to the *book value*¹³ of their assets, and on low dividend yields, have some form of "market approval" which enhances their chances of borrowing new capital on favourable terms. They could even raise capital by issuing new shares, *rights* or bonds at higher prices. In addition, transaction prices and quotations provide investors with an indication of the market value of their wealth which may influence

¹² For further detailed discussion on the stock market see, for example, Pratten (1993) and Foley (1991).

¹³ The book value of a company's assets are the values given in the company's balance sheet.

their decisions about consumption expenditure. When prices are at historically high levels and/or rising this indicates confidence among investors and may affect the confidence of businessmen and hence, their investment decisions. At other times, the stock market enables investors to either liquidate or re-allocate their investment to other financial assets.

The benefits of having a well developed capital market are many. Apart from enabling corporations to raise equity capital, the market allows both inter and intra-sectoral competition between various instruments of the banking system and non-bank financial intermediaries based on each investor's risk, return and time considerations¹⁴. It also allows risk sharing on an individual basis, (without the need for a Government's guarantee); offers instruments that do not suffer from a cash-flow mismatch; offers investors greater opportunities for diversification (both domestically and internationally); provides alternative access to medium and long-term funds; enhances market allocative efficiency; facilitates in the privatisation of the public sector; allows indigenisation of the ownership of foreign firms through investment; allows broadening of ownership base; improves access to foreign equity and encourages the development of other financial markets and financial derivatives such as options and futures markets that enable investors to hedge, spread and manage their risky investments.

Nevertheless, as mentioned earlier, developing the capital markets are not without cost. In addition to the costs that can occur through uncertain political, economic, financial, legal and tax environments, certain problems inherent in the system cannot be avoided. These include the inevitability of market cycles, interest and exchange rates fluctuations, instability of money flows, intermediation costs, the need

¹⁴ Investors could employ some tools such as the Capital Asset Pricing Model (CAPM) to assess their expected returns relative to the risk they face in the investment. The CAPM given by : $k_e = R_f + \beta (k_m - R_f)$, suggests that the required return on a firm's stock (k_e) is a positive function of (i) the risk-free rate of return (R_f); (ii) the market rate of return (k_m); and the stock's beta β which represents the sensitivity of the stock's returns relative to the market returns, whose index is usually taken to be 1.0. For more rigorous discussion, see Markowitz (1959) and Sharpe (1971).

for additional regulation, loss of some control over the financial system, possibilities of unhealthy speculative and dishonest activities such as insider trading and market-rigging, loss of local ownership, deterioration in allocation of funds due to market and price distortions, overemphasis of profit motives in capital allocation at the expense of socially desirable investments, and many others¹⁵.

6.3 Benefits and Costs of Developing the Stock Market

The academic literature toward encouraging and discouraging securities market development in developing countries is still in open debate¹⁶. However, most of the support for each view has been based on each author's experiences and empirical evidences from the countries being analysed. For example, those looking at the successful development situations in Asia see much more room for optimism than those looking at the situations in Africa or Latin America. Due to the complexities of securities markets and the inter-relationships between government policy, market forces and investor's behaviour, current theoretical and empirical research has yet to produce a conclusive answer to this question. Nevertheless, we believed that the benefits of the markets outweigh their costs; and the inherent problems (seen as obstacles), could be overcome with proper policy, regulation and foresight. We shall briefly outline some of the benefits and costs of developing the stock market in the following section¹⁷.

6.3.1 Benefits of the Stock Market

1. *Increased Efficiency of the Financial System.* The existence of a well-regulated stock market can increase efficiency of the financial system through

¹⁵ See Sudweeks (1989).

¹⁶ For example, see Ajit Singh (1992) "*Should Developing Countries Encourage Stock-markets ?*".

¹⁷ See Sudweeks (1989) and Kitchen (1986) for further details on the topic.

competition among different classes of financial instruments, thereby raising the nominal rates of savings to savers, and lowering the rates to borrowers. When there are alternatives in the investment of financial instruments in the market, and as institutions compete for the same pool of funds, the investment yields and financing costs tend to be competitive.

The choice of instruments with differing risk and return characteristics would also enable the investors to construct their desired portfolio. For small investors, this may not be possible if investment is made within the banking system. In the Bank Islam Malaysia, for instance, the investor's choice would generally be the investment deposits with varying maturity dates, without much flexibility of spreading his risk.

2. Fund Term Matching. The stock market helps in matching the preferences of savers and investors relating to liquidity, enabling the funding of long-term projects with short-term financing. Investors who prefer current consumption will be able to liquidate their investments through the secondary market. In other words, it enables firms to raise long term capital without requiring the share holders to commit themselves for the duration of the project.

In addition, the stock market has made it possible to separate the ownership of the firm from its management. Given the immense financing requirements of modern corporations and its inherent risk in large businesses, the stock exchange provides a source of finance which not only affords risk sharing but also allows management to pursue long term policies as changes in the ownership structure (normally) have no effect on such policies.

3. Mobilisation of Savings. The stock market facilitates the mobilisation of savings. To the extent that equity is a viable and relatively secure form of investment with an attractive long-term return, it serves two functions. Firstly, it provides an

incentive to save and invest rather than to consume or to buy land or houses; and secondly, it competes with bank deposits which may be subject to interest rate controls. Financial savings tend to be promoted over non-financial savings, and consequently, the overall domestic savings rate may increase.

In Malaysia, the Government promotes investment in its capital market by offering very competitive brokerage fees on share tradings and tax rates on capital gains and dividend yields. There are also very attractive tax schemes for the Bumiputeras investing in the ASN/ASB unit trusts. The aims are to encourage long-term investments, equity ownership, and diffuse corporate shareholding.

4. Effective Allocation of Investment. An effective stock market creates healthy competition between the corporations and the Government to secure funds, thereby making investment more efficient. Since poor decisions in the market-place may have severe effects on the price at which the market values a firm, management of funds would be conducted effectively. In countries without an equity market, the close relationships between banks and industrial groups can possibly hide poor performance of various member companies by shifting funds between companies. Thus, the stock market also serves as a safety valve to ensure that price distortions are kept to a minimum.

5. Indigenisation of Investment. One of the concerns of Governments in developing economies, especially those dependent on foreign capital for development like Malaysia, has been to free the private sector from foreign control without necessarily or seriously endangering economic growth. The ability of domestic individuals to purchase shares of foreign firms and to turn private domestic savings into equity investments can yield higher benefits, including continuity in growth, possible greater profit retention in the country, and greater degree of control by domestic investors. However, this can only materialise if there is a meaningful response from a

large section of the population. In Malaysia where about 50% of the population are Bumiputera Muslims, it is important for this community to participate in the stock market so as to broaden the ownership base and enhance their long term economic well-being.

6. Broadening of the Ownership Base. In the absence of a viable stock market, companies will turn to banks and other financial institutions in order to meet their short and long terms capital requirements. In many cases, access to funds is ensured by seeking control of a few banks. The experience in Malaysia was that most of the local banks (in the early years after independence) were owned by various Chinese-clans who preferred to finance businesses of their own clans. In other cases, the banks may also require equity stakes as a condition for financing, often leading to a narrow ownership base.

As their equity stakes increase, these financial-industrial groups could even develop into quasi-money and capital markets themselves, effectively allocating funds on the basis of the firms they control rather than on the investment opportunities. This can bring about ineffective allocation of funds and problems for both the industries and the banks. The stock market overcomes these issues by engaging in the free flow of market supply and demand for the companies' shares in raising capital, while simultaneously enabling the ownership base to be broadened. In fact, this was also one of the targets of the NEP in encouraging the private and wholly-owned Chinese companies to go public to enable the Bumiputera trust agencies to own their shares.

7. Others. In addition to the above, other benefits of the stock market include : improving access to foreign equity and investments, reduction in the debt/equity ratios for companies, access to capital for new companies, facilitates the privatisation process by the orderly transfer of Government shares/projects to the private sector, and many others.

6.3.2 Costs of the Stock Market

1. *The Inevitability of Market Cycles.* Although it is normal to find markets reacting quickly to domestic and international events, the causal relationships often remain unclear. It is important to note that market cycles can have a significant impact on the raising of capital. In an emerging market like Malaysia, activities in the secondary market could undermine investor's confidence in the primary market, which in turn affects the ability of companies to raise funds.

2. *Destabilising of Capital Flows.* In countries where foreign investors are allowed free access to local markets, there is the possibility of destabilising capital flows in and out of the country, with the attendant impact on money supply and inflation. For instance, in 1994, due to a major correction in the Kuala Lumpur stock market, the country experienced a net foreign capital outflow of RM1.3 billion (£0.33 billion) or 2.2% of the total flow of funds for the year¹⁸.

Related to the volatile flow of funds, are the fluctuations of interest and exchange rates. In today's open economy these are inevitable, especially as the developing countries become more integrated into the world economy. However, volatile exchange rates affect the amount of foreign funds coming into or leaving the country's capital market, further destabilising the economy. In addition, since interest rates are very closely linked to shares and bond prices, the presence of the stock market would impose further constraints on the Government to chart and achieve its monetary objectives. To a certain extent, this implies some loss of direct control over the financial system. If there is tight monetary policy, the companies have the option to sell equity.

¹⁸ See Chapter 3, section 3.6.1 for further details. Nevertheless, the reason could also be the improving situation in home countries or comparative advantage of allocating the funds elsewhere.

3. *Possibilities for Speculation and Dishonest Activity.* Stock markets may encourage "wild" speculation both by individuals and institutions which (if followed by collapse in the market), could ruin them. The crashes of Wall Street in 1929, Hong Kong in 1973, the unofficial Kuwaiti's Souq Al-Manakh in 1982, and the more recent global crash in 1987 are but some striking examples. The stock market could also provide an arena for dishonest activity, such as market rigging, insider trading and issuing false or misleading information in companies' prospectuses. These are problems still encountered even by developed industrial markets.

In order to curb these activities, the financial system requires an independent regulatory body such as the Securities Commission, to monitor and control the orderly functioning of the market. This incurs costs which only add further to the existing intermediation costs. Although in general virtually all costs in the equity market are being absorbed by the players themselves, ultimately the expenses will be passed on to the investors.

4. *Others.* In addition, without proper regulation there could also be loss of local ownership of companies to foreign investors, and "inefficient allocation" of funds from a national perspective. Although stock markets may allocate funds to the activities that are expected to show the greatest financial profit, the allocation may not be fulfilling the nation's social interests. An example is the *gaming* companies in Malaysia which have been known to be among the most profitable counters for short-term investment.

6.4 Some Critical Issues of the Stock Market

Having discussed the roles and function of the stock market, there is little doubt of its necessity and benefits especially in a developing and open economy like Malaysia. Nevertheless, it is relevant to examine some of the criticisms and arguments that cautioned policy-makers' over-reliance on the share market for financing private

industry, and more importantly, its relevance as an effective means of achieving economic growth with equity (or fairness). The issues raised have, to a certain extent, stirred uneasiness among a few conservative Muslim clerics in Malaysia who in turn influence the opinion of the general (Bumiputera) Muslims community on the legitimacy of investing in the stock market. The situation was made worse with the development of complex trading strategies involving financial derivatives such as options, futures, swaps and others which are often difficult to comprehend. Some observers felt there was no justification to promote paper wealth which often exceeds productivity in the real economy. Before offering the *Shari'ah* considerations on the permissibility of stock market investments, we shall examine some of these issues and their empirical evidence.

6.4.1 Concentration versus Distribution of Wealth

The Government has long recognised that in order for Malaysia to achieve its goal of being an industrialised nation by the year 2020, it has to reduce its role in the market to encourage the private sector to take the lead in future economic expansion. In this regard, the role of the financial markets in mobilising funds to meet the investment needs will become more crucial. At the same time, the securities market has also been considered as an important means in realising its social engineering policy of generating and distributing wealth equitably, among the various ethnic communities. This was hoped to redress the economic balance and eradicate poverty which was very prominent among the Bumiputera Muslims. In fact, the introduction of the privatisation policy offered the Government the dual benefits of achieving higher growth in the manufacturing sector, as well as providing further opportunities for the Bumiputeras to broaden their equity ownership base in the capital market.

As mentioned at several places, although there has been a significant improvement in the financial position of the Bumiputera Muslims in general, the hopes

of achieving broader goals did not materialise. Instead, some critics claimed that the policy tends to promote the concentration of wealth among the hands of a few - a small group of Bumiputera elites with strong political connections¹⁹. Consequently, the intra-community economic gap widens further, prolonging the poverty issue and inequitable distribution of share ownership among the Bumiputeras themselves, the problems it initially sets out to resolve²⁰.

The issue of shareholders concentration seems to be similarly experienced in the United States. As Robinson (1981) noted, statistically in the United States, about one per cent of the population owns about 80% of all stock shares, 100% of tax-exempt Government bonds, and 90% of corporate bonds. Another 9% of the population owns nearly all the remainder, so about 90% of the population owns virtually nothing in the way of investment assets.

Earlier we have seen that many of the factors that have (possibly) caused the Bumiputera Muslims problems to persist were brought about by their own attitudes. Nevertheless, perhaps it is also relevant to examine whether the policy that emphasised equity market as an effective means of achieving the NEP's goals of *wealth distribution*, *poverty eradication* and *equitable investment participation among communities*, has been appropriate and adequate. To what extent has it been complementary to other policies? Are the policies at fault or is it the methods of implementation that need to be reformed? Does the concept of Bumiputera trust agencies need to be radically transformed to accommodate greater accountability from the management? We believed the problems lie more with the politicians and bureaucratic middlemen rather than the

¹⁹ See Gomez (1990) and Sieh-Lee (1987) for related discussion. Often we find situations where prices of some companies were artificially driven up by well-connected politicians who needed to raise money for their own political interests.

²⁰ See Jomo (1989) and Mehmet (1986).

equity market itself. However, the discussion is beyond the scope of our study, but could be an interesting area for further research.

6.4.2 Paper Wealth versus Real Economy

Robinson (1981) in his criticisms of the stock market noted :

"Admittedly, it is preposterous to suggest that stock speculation is like coin flipping. Of course, there is more skill to stock speculation. What is difficult to determine is - how much more ? The stock market in many important ways is analogous to a *game of chance* in which the players play against each other, and in which the house charges an amount proportional to the total amount played. The stock broker corresponds to the *house* in the game of chance. The commissions that the trader pays to the broker correspond to the percentage of the stakes paid by the player to the house. The speculators (or traders or investors) in the stock market correspond to the players in the game of chance..."

Further, *The Economist* in its leader of 9th. September 1989 noted :

"Taiwan's stock market is a rigid casino with a phenomenal turnover. Its banks are constipated by a diet of state control. Its family-control firms equate accountancy with tax-evading creativity. Its courts react not just to the law books but to the nudges of the influential. Critics say it is free-wheeling and as corrupt as the Philippines, but then admit it is a free wheel that works."

In well-developed markets with large institutional investors and professional fund managers, share prices would generally be determined on the basis of companies fundamental values and earning prospects²¹. However, empirical evidence has shown that this has not been the case in many developing and emerging markets, including

²¹ Generally, each share of stock is assumed to have an *intrinsic value* based on investor's expectation of the discounted value of future cash flows generated by that stock. In an efficient market, the price per share is considered an unbiased estimator of a stock's intrinsic value and reflects the latest information available concerning the issuing company's condition and future prospects.

Malaysia²². For instance, some observers argued the Kuala Lumpur stock market was so speculative and volatile that the amount of "paper wealth" created in 1993 far exceeded the output of goods and services by the "real economy". Total market capitalisation rose from RM245.8 billion (£61.45 billion) at the end of 1992 to RM619.6 billion (£154.9 billion) at the end of 1993, resulting in a paper wealth creation of RM373.8 billion (£93.45 billion) or 128% over the period²³. This compares against an estimated Gross Domestic Product (at 1978 constant prices) of RM100.84 billion (£25.21 billion)²⁴ for the year 1993, which implies that the paper wealth creation was more than 3.7 times the production of actual goods and services. In the following year, a dramatic turn of events took place when the market underwent major corrections with the KLSE Composite Index (as the main market indicator) losing almost 24% of its value within eleven months, leaving several investors bankrupt for lives.

However, it is apparent that the critics have been rather confused as to the difference between the "stocks concept" in the financial markets and the "flow concept" in the real economy. The flow (income) refers to the quantity of an economic variable measured over a period of time. Thus, the flow of investment may be measured as the amount of investment expenditure per year. This term is used to distinguish these measurements from stocks (assets), which measure the physical quantity of an economic variable, the value of which has no time dimension. In short, it is not uncommon to find a company's assets (whose intrinsic value is presumably reflected by its market share price) to be worth much more than its annual value of production of actual goods and services (imputed in the computation of the GDP).

²² See Singh (1992) and International Finance Corporation, IFC (1990).

²³ See table 4.4 in Chapter 4.

²⁴ See table 2.4 in Chapter 2.

In addition, the extreme speculative trends during the year are not issues that justify abandoning the stock market. The fault has less to do with the stock market than the characteristics of the investors and market "inefficiencies" which collectively permit such events to occur²⁵. In fact, even if the market was considered "efficient", what constitutes the market's "true intrinsic values" are still subjective. Indeed, the economic growth should be dictated by real variables such as productivity, demand for output, technical progress and relative factor prices of capital and labour; however, the experience of market buoyancy in 1993 was more an isolated incidence of extreme short-termism among investors rather than the norm.

By and large, the Kuala Lumpur Stock Exchange has worked reasonably well but it does face challenges. Apart from the need to educate investors, nearly all of these challenges are, however, technical in nature and can be met given that sufficient resources can be committed to this task. The situation in 1993 was more of a temporary setback for the market, rather than an event resulting in more sustained damaged. In fact, it provides experiences for the regulators to be more vigilant to ensure an orderly market and to curb speculative activities, market rigging and price manipulation by some unscrupulous traders and brokerage houses. What the market requires was the enforcement of stiffer regulations that offers more transparency to ensure full disclosure and wide dissemination of information to the public. Some observers felt it was a maturing process both for the investors (individual and institutional) and the market alike.

²⁵ As mentioned earlier, in an efficient market share prices tend to adjust rapidly and reflects all new information made known about the assets. In fact, whether a market is efficient or not is also subjective and open to debate, due to the assumptions placed on its hypothesis. Further, inefficiency is quite a common feature among new emerging capital markets like Kuala Lumpur. This could be due to many factors such as poor communications, lack of competent analysts and professional advisers, different risk perceptions among investors due to lack of understanding and experience, inadequate market regulations and standards of disclosure by companies, and many others. See Kitchen (1986 : Chapter 2) and Keane (1983).

6.4.3 Debt versus Equity Financing

One of the most important decisions companies often have to make is determining the optimal balance between using debt and equity as a source of financing. In the traditional theory of finance, debt is considered a cheaper source of funds though with a higher level of risk than equity. Many corporate tax systems, for example, allow interest to be deducted as costs, which provides a significant tax advantage in the use of debt finance. Besides, it would also avoid any possible *dilution effects* on the existing shareholders wealth, if financing were to be done through new equity. There is, however, a trade-off, since too high a level of debt increases the risks of bankruptcy or financial distress in an economic downturn. This led to a trade-off model which encourages firms to seek an optimal debt-equity ratio which maximises its stock market valuation.

However, empirical evidence have shown that equity markets in some economies have not been very significant providers of funds for long term investment projects. For a number of reasons, managers in large corporations avoid going to the stock market to raise funds. Even in the UK and the US, with financial systems widely perceived as market led, public capital markets play a minor role in the financing of a typical firm²⁶. In other major economies such as Germany, Japan and France, reliance on public markets has traditionally played an even smaller role with banks providing a major proportion of long term capital needs. Foley (1991) noted that in Germany, there were less than 500 companies quoted on its various exchanges and France has less than 650, so it is quite clear that a considerable volume of economic activity manages to be sustained without a stock exchange. This led some critics to question whether there is any need for Malaysia to develop its stock market as a means of generating growth and wealth redistribution²⁷. They suggested that the alternatives are for the banks to widen

²⁶ See Foley (1991 : Chapter 8) and Singh (1990 ; Chapter 9).

their range of services to include products such as Islamic unit trusts and other investment instruments which might be more appealing to the Bumiputera Muslim investors, and more effective as a means of increasing investment participation, relative to encouraging them to dabble in shares on the stock market.

Some studies have attempted to show that bank-based financial systems are superior to those which are stock-market based. For instance, Diamond (1984) suggests that a bank lending to corporations allows the advantages of a single party monitoring. If finance is provided through a stock market, diverse ownership means that shareholders may waste resources by costly repetition of monitoring. Further, bank loans can be renegotiated more easily than securities sold in the stock markets. There are also better incentives for various types of information to be gathered about borrowers than with stock markets, all of which make banks the better allocator of resources²⁸.

However, most of these arguments have been refuted by several other studies claiming that the standard arguments presented above do not capture all the benefits of stock markets mentioned earlier²⁹. Allen (1993) argued that the issue of bank monitoring relies on the assumption that there is a consensus on the way the firm should be run. In the absence of the latter, banks may not be as effective as the stock markets (with an efficient pricing process) in allocating financial resources. Apart from the market process of demand and supply, the effective pricing mechanism is also seen in cases of mergers and take-overs where management teams would compete for corporate control in their attempt to offer a better deal for the shareholders. This should be

²⁷ Economists claimed that after all the development of capitalism was not contingent upon the existence of such markets and in the UK, the markets have only become real providers of capital to the private sector since the late nineteenth century.

²⁸ A comprehensive survey of these and other recent theories of banking is provided in Bhattacharya and Thakor (1992).

²⁹ The detailed arguments are beyond the scope of our study, however, Allen (1993) provides a good summary and references to the analyses.

considered as an essential part of the competitive selection process for an economy, which would be less effective in a bank-based financial system.

Perhaps a more compelling reason to promote equity financing for a developing economy like Malaysia, is that it offers the opportunity to reduce the country's over-dependence of foreign debt and remove the burden of national indebtedness. The limitations of debt financing are increasingly evident at both the micro and macro level³⁰. At the micro-level, risky business ventures financed by equity do not have to guarantee a return as they do in the case of bank borrowing. As Wilson (1993) aptly pointed out, the fact that there is flexibility in the pay-off, which is related to the project being undertaken, actually serves to reduce risk and enhance the likelihood of successful outcomes. Although debt has its uses, it often leads to problems in cases of business failures, or when it is used as a means of financing risky ventures and long term projects.

6.4.4 Growth in Savings

Apart from efficient allocation of investment resources, it is claimed that in principle, a well-functioning stock market may help the development process in the economy through the growth of savings. However, here again there is little or no evidence of an increase in aggregate savings as a result of greater *new issues* activity on the stock market. For instance, despite the introduction of the privatisation programme in Malaysia, there was no significant increase in the Gross National Savings between the years 1976 and 1994³¹. However, this could simply represents the substitution of one form of savings (such as bank savings) for another (purchase of corporate shares in the stock market).

³⁰ See Gillis, et. al. (1992).

³¹ See table 3.4 of Chapter 3.

In fact, this is a non-issue because the holdings of corporate share capital are typically considered to be or counted as part of wealth (or financial assets) rather than savings (which are monetary assets). Generally, in the measurement of savings only the monetary assets in the banking system, for instance, are taken into account leaving aside those "savings" which appeared in the form of corporate share financial assets.

Nevertheless, even if aggregate savings have not risen, it could be argued that the stock market is still useful in so far as it leads to a more efficient allocation of these savings, or to better corporate performance as a result of the stock market exposure.

Next, we shall examine some of the *Shari'ah* considerations on the permissibility of stock market investments.

6.5 Islam, Shari'ah and the Market

In order to appreciate Islamic jurisprudence on stock market trading, some clarification and familiarity with Islam and the *Shari'ah* is considered important. The latter forms the legal basis from which the Islamic code of conduct on trading is deduced. Prior to discussing the general principles of market regulation and trading in Islam, we shall, firstly, provide a cursory outline of the religion's value system, as well as the foundation and framework on which the *Shari'ah* operates.

6.5.1 Islam - Its Meaning and Message

Islam denotes submission, surrender and obedience. As a religion, Islam stands for complete submission and obedience to *Allah*. The other literal meaning is peace - which is again the message of Islam.

Islam is not a religion confined to the private life of man. It is indeed a complete way of life and its values are universal in character, transcending across geographical, racial and linguistic differences, catering for all the fields of human existence in all phases of life. It integrates man with *Allah*, awakens in him a new moral consciousness and incites him to deal with all the problems of life - individual and social, material and moral, economic and political, legal and cultural, national and international - in accord with his commitment to *Allah*. Hence, Islam does not only deal with matters ordinarily known as religious rituals.

Islam does not divide life into domains of the spiritual and the secular. While Islam commands its adherents to *"seek what is good in the hereafter and to guard oneself from the eternal fire"*, it also directs its followers *"not to forsake his portion of this world"*³². In fact, wealth and power are not only permitted; they are even rewarded with more favours, providing those who possess them remain grateful to *Allah*³³, and more importantly, observe His guidance. In short, Islam does not admit any dichotomy between material and moral, mundane and spiritual life, and enjoins man to devote all his energies to the reconstruction of life on healthy moral foundations. It teaches him that moral and material powers must be welded together, and spiritual salvation can be achieved by using material resources for the good of man in the service of just ends and not by living a life of asceticism or by running away from the challenges of life. Thus Islam aims at establishing an equilibrium between these two aspects of life. It is the inability to strike this balance that sometimes confronts some pious Bumiputera Muslims to the extent of forsaking the essential modern economic activity of investing in the capital market.

³² Quran (28:77).

³³ Quran (14:7).

6.5.2 The Shari'ah

The primary sources of guidance for the Muslims are the *Holy Quran* and the *Sunnah* (the traditions of the Prophet Mohammed, pbuh). In addition, the secondary sources include the *Ijma'*, *Qiyas* and *Ijtihad*³⁴. The ideal Islamic life requires the total submission of every aspect of life, private and social, to the universally applicable law of *Allah*, the *Shari'ah*³⁵. The laws of Islam are therefore divinely pre-ordained, revealed to the Prophet upon the fundamental concept of *Tawhid* (monotheism). The *Shari'ah*, as a comprehensive and coherent body of legal injunctions, constitutes the commands and prohibitions of *Allah* and is therefore binding and incumbent upon the Muslims. Its prime objective is to promote the welfare of the people in this world and the life hereafter, reflected in the form of socio-economic justice, mercy, well-being and wisdom.

Within this framework, Islamic obligations and prohibitions are categorised into two major branches of *fiqh* (Islamic jurisprudence), namely *'Ibadah* and *Mua'malat*³⁶. What is relevant in our discussion is the principles of *fiqh mua'malat* in relation to share trading in the stock market. These are laws pertaining to transactions, commercial or otherwise, which determine man's ethical obligations as a member of the social community. The subject covers divine injunctions on a wide range of topics including

³⁴ *Ijma'* refers to the consensus among Muslim jurists on a particular legal issue, during a specific period of time; *Qiyas* is an analogical deduction of an issue; and *Ijtihad* is the process whereby every possible rational effort is made by a jurist to arrive at an appropriate ruling on the basis of the *Shari'ah*. It is in the latter that one often finds differing opinions and competing views of rulings on some trade practices. Since it is a form of *independent reasoning* of the jurist, there is a possibility of human error in its exercise, and thus, rules that are so derived do not command finality as compared to the *Quran* and the *Sunnah*.

³⁵ Literally, *Shari'ah* means the path to the watering place, the clear path to be followed and the path which the believer has to tread in order to obtain guidance in this world and deliverance in the next.

³⁶ *'Ibadah* refers to laws concerning religious practices, worship, religious rites and others that relate man's duty to *Allah* to fulfil his spirituality. Some scholars have included *Munakahat* and *'Uqubat* in addition to the above. The former refers to civil and family laws while the latter are laws concerning punishments for transgressors of the Islamic moral order. See Nomani and Rahnema (1994).

the principles of trade practices, modes of financing, sale and purchase agreement, acceptable and prohibited types of investment, contract, ownership and even consumption.

6.5.3 General Principles of Market Regulation in Islam

Prior to discussing the Islamic jurisprudence of financial intermediation, we shall briefly look at the general principles of market regulation and business in Islam. These principles, though not exhaustive, will serve as the criteria for evaluating contemporary stock market practices in succeeding parts³⁷ :

1. Islam requires the market to operate on the free will of buyers and sellers. Thus all decisions related to savings and investment, production and consumption are made by individuals and institutions on the basis of their respective judgements. In other words, the prices of stocks and shares, for instance, must be determined by the free flows of supply and demand along with complete information made available to all participants.

The disclosure of information is vital because any transaction that is effected based on inaccurate information, provides the buyer the option to revoke the contract. Nevertheless, in general, the state does not intervene in the market operations except in situations where economic justice is at stake. For example, when there appears to be market manipulation, rigging, fraud, cornering³⁸, insider trading, withholding of

³⁷ For more detail discussion on the topic, see Khan (1988) and Wilson (1984).

³⁸ *Market cornering* is defined as a situation where a person or persons, acting in concert, had acquired such control of the shares that those shares cannot be obtained except on terms dictated by them. On the other hand, *insider trading* refers to those having access to sensitive and key information of the company, before their intentions are announced, and using this information to profit from it by trading on the stock market.

information, and the likes (which are forbidden even in the conventional practice), the regulators will be required to intervene in order to restore an orderly market³⁹.

In a modern and efficient secondary market, full disclosure of companies are made mandatory and whenever there occur adverse changes in their trading prices for no apparent reasons (or for reasons not made known), the counter would receive the immediate attention of the regulators and in most cases (as in the KLSE) be suspended from trading.

2. The Prophet (pbuh) forbade certain market practices such as *ikhtikar* (hoarding), *gharar* (sale and purchase with uncertainty or ambiguity), sale of something which one does not possess, and several others. There should be no ambiguity in the price, object of sale, time and place of delivery of the item. In a related tradition, the Prophet (pbuh) indicates that each transaction must involve the physical transfer of the commodity (or shares) ownership from the seller to the buyer. It was these principles that led most of the conservative Muslim jurists to disallow transactions involving contra trading, short-selling, futures trading, options, and its related derivatives.

3. Islam prohibits *riba* (interest) in any forms of business transaction. Hence, in general, this precludes the Muslims from engaging in margin transaction on the stock market. Margin trading involves the buying and selling of securities in a margin account in which money is owed to the brokerage firm. The account permits an investor to purchase securities on credit and to borrow on securities already in the account. Interest is charged on any borrowed funds for the period of time the loan is outstanding.

³⁹ An eminent jurist, Ibn Taimiyyah (1263-1328 A.D.) explained in detail on the institution of public duties in Islam (*al-Hisba*). See Holland (1982).

4. In a sales transaction, although it is permissible to defer the payment (as in *Bai' al-Murabahah*) or to defer the delivery of the commodity (as in *Bai' al-Salam* or forward sale, and *Bai' al-Istisna'* or sale on order), Islam does not permit the deferment of both items at the same time.

Based on these principles, we shall discuss some competing views of the *Shari'ah* on aspects of *Mua'malat* (transactions) in the stock market.

6.6 Islamic Jurisprudence of Financial Transactions

Mirakhor (1994) contends that the position of *Shari'ah* towards any financial transactions is permissible so long as it does not contain elements of *riba* (interest) and/or *gharar* (uncertainty or ambiguity leading to exploitation, fraud or injustice)⁴⁰. This flexibility makes possible a virtually open-ended menu of various modes of financial transactions, instruments and contractual forms so long as the contract does not contain these two elements. In general, the modes of financing of a company listed on the stock exchange are either through internally generated funds such as from its capital reserves or, raised through some external means. The latter includes the various forms of equity financing (raised through the issuance of common stocks, rights issues of shares, preferred stocks, etc.), and debt financing (such as bank loans, bonds, loan stocks and many others).

6.6.1 Debt and Equity Financing in Islam

Equity financing in the stock market is by nature participatory and accords well with several principles of financing in Islam such as profit and loss sharing. Based on

⁴⁰ A third element that could be added here is *maysir* (or gambling) which we shall explain later.

the sources of the *Quran* and the *Sunnah*, most jurists contend that Islam permits both debt and equity financing provided they fulfil the various principles governing Islamic transaction, some of which have been mentioned earlier.

Accordingly, the permissible debt financing falls under the '*Uqud al-Muawadhat*' category (or deferred contracts of exchange) which includes contracts such as *Al-Bai' Bithaman Ajil* (deferred instalment sale), *Bai' al-Murabaha* (deferred lump sum sale), *Al-Ijarah* (leasing), *Bai' as-Salam* (forward sale), and *Bai' al-Istisna'* (sale on order). On the other hand, the equity financing is categorised as *Uqud al-Ishtirak* (or contracts of profit sharing) such as *Al-Mudharabah* (trustee profit sharing), *Al-Musyarakah* (joint-venture profit-sharing) and several others⁴¹

In general, there are no major differences between the nature and characteristics of equity financing in the conventional and Islamic financial systems. In fact, in essence, the Islamic concept of joint venture profit sharing is akin to the existing concept of joint stock companies. The principle of risk sharing and co-operation through equity participation is certainly preferable to the conflict of interest which often exists in a debt financing situation. The equity in the form of common stocks or shares represents an indivisible portion of the company's total assets. Since the shares are considered as fungible financial assets and units of ownership, most Muslim jurists agreed that they are tradeable items. Thus, provided that a company observes the various principles of Islamic business practices, it is permissible for the company to finance its investments or projects through equity participation in the stock market, venture capital, unit trust schemes, or any other forms of profit and loss sharing arrangements.

On the part of the participants or investors, the choice of companies securities that they could invest need to comply with some specific *Shari'ah* rulings. There are

⁴¹ See Ismail (1995).

certain types of companies that jurists have considered as *non-halal* (or forbidden), and hence they are not permissible for Muslims to invest in. These include securities of those companies which have significant involvement in interest-based banking and finance company services, conventional insurance, gaming, alcoholic beverages, and other forbidden products. As far as companies on the Kuala Lumpur Stock Exchange are concerned, the restriction on interest-based banking and alcoholic beverages means that the entire finance sector (apart from the Bank Islam Malaysia) and the hotel sector would have to be excluded. The hotels have been considered non-permissible for they serve liquor on their premises.

While there are several similarities in the equity financing, the same cannot be said of the debt financing or the debt market between the conventional and Islamic financial systems. As mentioned earlier, debt financing in Islam is based upon the *deferred contracts of exchange*, whereas in the conventional system it has been invariably built upon *riba* (or interest-based lending), which is prohibited in Islam. There is now a general consensus (though not unanimity) among Muslim jurists that its prohibition extends to all forms of interest, nominal and real⁴². At least four characteristics define the prohibited interest rate. It is fixed ex-ante; it is tied to the time period and the amount of investment or loan; its payment is guaranteed by the borrower (in this case, the firms) regardless of the outcome of the transaction for which the money was borrowed; and the state apparatus sanctions and enforces its collection.

Notice that none of these characteristics accord with the basic form of buying and selling of common shares of companies on the stock exchange. Dividends for the common stockholders are neither fixed nor guaranteed. Their dividend income rises with prosperity, and declines with economic adversity; the prices of their stocks

⁴² Some scholars felt that it is *real interest* that should be prohibited but not *nominal interest* which merely keep up with inflation. (This is beyond the scope of our discussion). See Wilson (1984) and Chapra (1985).

fluctuate in the market by the free flows of supply and demand. Nevertheless, as mentioned earlier, the interest element would generally surface in circumstances involving *margin transactions*, or in other modes of leverage in financing its purchase, as well as in other financial instruments such as preferred stocks, conventional bonds and some derivatives. Although margin financing involving *riba'* (interest) is indeed forbidden, it would be permissible if the purchase is secured with the Islamic mode of debt financing. For instance, the shares could still be acquired on margin if the transaction is secured by means of *Bai' Al-Musharakah* (joint venture profit sharing) or *Bai' Al-Murabahah* (deferred lump sum sale) between the investor and the financier⁴³.

6.6.2 The Rationale for Prohibiting Gharar

The second element that has caused some concerns among the Bumiputera Muslims in stock market investment is *gharar*. Perhaps there are as many definitions of *gharar* as there are Muslim jurists' schools of thought. While many regard it as a situation involving the element of uncertainty, risk, or speculation, it generally refers to a transaction which is ambiguous and uncertain, often leading to fraud, injustice and exploitation. Basically, the element can operationally be said to exist if one (or both) of the contracting parties is in possession of some information regarding the subject of the contract (in this case, the probable intrinsic value of the firm, or its true potentials), and withholds that information from the other party. In other words, *gharar* involves a situation where there is a lack of transparency and asymmetrical information among the concerned parties, similar to the case of *insider dealing*, which is prohibited in Islam.

According to widely postulated traditions, the source of the prohibition of *gharar* comes from the Prophet (pbuh), who forbade the "sale of a bird in the air, or a fish in the water, or a foetus in the womb, or milk in the udders, or fruits before

⁴³ See Mannan (1990).

ripening, etc.". There are four elements that are inherent in *gharar* : (i) the object of the contract does not exist; (ii) the object of the contract exists but there is no guarantee in delivering; (iii) there is no specification of definite quantity or price; and (iv) there is no specification of time period in the transaction for the delivery.

In essence, the underlying reason for the Prophet (pbuh) prohibiting *gharar* was to protect all the contracting parties, especially the party who was less knowledgeable, less experienced, and hence at a disadvantaged as compared to his counterpart. This idea of protecting the weak against exploitation by the strong led to the elaboration of a rule of general application, commanding that any transaction should be devoid of uncertainty and ambiguity which, according to learned men and legal scholars, could only be secured by the contracting parties having perfect knowledge of the counter values intended to be exchanged⁴⁴.

However, according to Saleh (1992) the rationale behind the prohibition of all these sales is the fear of disputes, and the risk or uncertainty in the ability of the vendor to deliver the object of the sale which is not in his possession. In other words, the rationale for the prohibition was to prevent conflicts, exploitation and injustice among people. Thus, most Muslim jurists did not permit contracts or transactions involving short selling of shares, options, derivatives and futures trading⁴⁵. However, some scholars contend that the cause for concern was only during the time of the Prophet (pbuh) in the market place of Medina which was very small, unstructured and full of uncertainty in the regularity of supply of commodities. What the *Shari'ah* condemns (according to Ibn Qayyim al-Jawziyyah)⁴⁶ is not the non-existence of the material, so much as the uncertainty in honouring the contract.

⁴⁴ See Saleh (1992 : pp. 62-106).

⁴⁵ See Chapra (1991).

⁴⁶ Ibn Qayyim (1350 A.D.) is an eminent jurist and is a disciple of Ibn Taimiyyah. See Saleh (1988).

The prohibition no longer seems to relate to the modern market reality, especially in the area of futures trading. The settlements of contracts and transactions (be it shares or commodities) are guaranteed by the clearing houses and its regulations. It is for the same reason that modern Muslim scholars have allowed the manufacturing contract of *Bai' al-Istisna'* (sale on order) which involves the selling of non-existent items. The reason was that it responded to legitimate needs and it was commonly practised without leading to inordinate conflicts. Does this mean that short selling, options, derivatives and index futures tradings are legitimate since they fulfil economic needs? This requires further elaboration. Although it would be interesting to relate these issues, we shall maintain focus by confining our discussion to the legitimacy of investment in common shares on the stock market, as a form of participatory financing.

6.6.3 Contra Trading and Short Selling

In addition to *riba* and *gharar*, the *Quran* also prohibits games of hazard or gambling (*maysir* which literally means "getting something too easily", "getting a profit without working for it")⁴⁷. One of the most common issues confronting the Malaysian Muslims in relation to stock market investment is whether *speculation* and *contra trading* are similar to gambling. There was a growing concern in the Government that the Bumiputera Muslims might opt out of the economic activity in the capital market on religious grounds. In fact, the verses of the *Quran* mentioned were among the principal arguments that led the conservative Bumiputera Muslims to reject share trading. They claimed that the activity of speculation seems to resemble the act of gambling in which profit/loss often comes easily through capital gains/loss. We shall address this issue a little later.

⁴⁷ Quran (2:219) and (5:93).

Meanwhile, in *contra-trading* the customer neither collects nor delivers the securities he trades; rather, an arrangement is made with his broker to settle any outstanding difference, be it profits or loss, at given intervals of time. Such an arrangement is made possible on the KLSE because the settlement for the purchase could be made at any time before the seventh market day (T+7) following the deal. There was no consensus from the jurists on this transaction because, although (generally) the investor does not intend to participate in the company's investment, he has not violated any of the Islamic trading principles. The main reason that led some scholars to consider contra-trading as non-permissible lies in the violation of the *Shari'ah* principle of "selling something which one does not possess". However, in practice, at the point of time when the broker has effected the purchase (acting upon the request of the investor), the latter is effectively considered as the legal owner and "in possession" of the securities. Should he fail to dispose them within the following seven days, he may have to settle his outstanding account with the broker and keep the securities for himself⁴⁸.

Likewise, if the same argument is used to determine the legitimacy of short selling in shares, there arise another set of competing views. *Short-selling* is the practice of selling shares in which the seller, at the time of sale, does not own those shares in anticipation of an eventual fall in the share price. If the fall materialises, the short-seller will gain from the difference between the lower market price and his higher selling price; otherwise, he loses. During the interval, he normally borrows share certificates from his broker to fulfil any delivery requirements. If we were to employ the views of Ibn Qayyim mentioned above, then the issues of "uncertainty" and "non-existence" do

⁴⁸It may be true that such speculative sales combined with margin purchases could bring about an unnecessary expansion or contraction in the volume of transactions and hence contribute to the fluctuations of the stock prices without necessarily bringing any change in the company's intrinsic or fundamental value. However, he has still not violated any of the basic principles of trading in Islam. This is an activity which some scholars have considered "legally right but morally wrong".

not arise at all. However, if one were to hold to the principle of "selling something which one does not possess", then the transaction is undoubtedly non-permissible.

Thus it is relevant for the Bumiputera Muslims to appreciate some of the *Shari'ah* principles of permissibility and non-permissibility in business and stock market transactions.

6.7 The Shari'ah and Stock Market Investment

To facilitate and make things easier, and to remove unnecessary hardship from the people are among the cardinal objectives (*maqasid*) of the *Shari'ah*. In fact, it tends in many ways to characterise Islam in itself. The eminent scholar Al-Ghazali states that the very objective of the *Shari'ah* is to promote "the welfare of the people" which lies in safeguarding their faith, life, intellect, posterity and wealth. Another scholar Ibn Qayyim adds, anything that departs from justice to oppression, mercy to harshness, welfare to misery, and wisdom to folly, has nothing to do with *Shari'ah*. The dynamism of the *Shari'ah* is reflected in its capacity for continuous application and refinement, pragmatism and convenience, rather than a guidance of rigidity and fear. In fact, the latter would contravene the numerous *Quranic* directives on alleviation of hardships from the people⁴⁹.

However, the jurists from the Zahiris school of thoughts, maintained that business activity among the people should remain the way it used to be at the time of the advent of Islam. They have thus totally ignored the change of time and circumstances and their effects on the commercial life and activities of modern society and economy. Other jurists contend that the only basic requirement is the mutual consent of the parties

⁴⁹ Quran (2:185), (4:28), (92:5-7) and (2:280).

which, by the explicit authority of the *Quran* (4:29), constitutes the essence of all transactions or contracts (in matters which are not prohibited). To this Zarqa (1992) adds, the parties must be well informed and aware of the implication underlying the transaction, and the contract must be enforced and honoured.

Some of the important principles of *Shari'ah* which tend to characterise its basic outlook and policy on commercial transactions, be it in the banking system or financial markets, include *Ibahah* (permissibility), *Al-Taysir* (bringing ease), and *Raf'al-haraj* (removal of hardship)⁵⁰. These are among the salient legal maxims of *fiqh mua'malat* and an appreciation of them would shed further light on many issues surrounding financial intermediation in the stock market.

6.7.1 The Principles of Permissibility in Transactions

The norm in *Shari'ah* among commercial transactions is that "they are all permissible unless there is a clear injunction to the contrary". Muslim jurists have held that the *Quran* has explained what *Allah* has prohibited very clearly and that it is improper to presume a transaction (such as share trading) unlawful, even in the absence of supporting text in the Holy book. In addition, Ibn Taimiyyah, adds "*Allah* has never prohibited a transaction (contract) which brings benefits for the Muslims and does not inflict any harm upon them".

Based on the relevant evidence of the *Quran* and the *Sunnah*, Muslim jurists and commentators have drawn several enlightening conclusions on the subject of permissibility. They claimed that in order to declare a transaction valid, there is no need to search for affirmative evidence in the sources. All that one needs to investigate is

⁵⁰The explanation of these terms draws from the writings of Kamali (undated) and summarises only some key issues relevant to our discussion. The reader is, however, advised to refer to his paper for further clarification.

whether there is a clear and self-explanatory prohibition, and if none is found to exist, the transaction may be presumed to be valid. Secondly, the forms of trading and transactions that the *Quran* and the *Sunnah* have explicitly validated are not exhaustive and do not preclude new varieties on which the *Shari'ah* might have remained silent. Finally, with regard to new transactions (such as stock market investment), there is no need to search for supportive evidence in the views and precedent of early jurists for it is essentially incorrect to extend and apply a medieval juristic opinion to a form of trade that was not known in medieval times. The correct approach in such instances would be to attempt independent reasoning (*ijtihad*) in light of the basic guidelines of the *Quran* and the *Sunnah*.

Thus, based on the objectives of the *Shari'ah* and the preceding arguments, we contend that, provided there exist no elements of *riba* (interest), *maysir* (gambling), and *gharar* (uncertainty leading to exploitation, fraud and injustice) in the contract between the consenting parties of the investors and the companies, there are no reasons to believe that investing in the stock market (of companies whose nature of business are not prohibited in Islam), should be regarded as unlawful from the *Shari'ah* perspective. Although the acts of market manipulation, cornering, rigging and insider trading are frowned upon even in conventional practice, these are problems of investors behaviour rather than the stock market as an institution that promotes financial intermediation⁵¹. However, there remains another crucial element that needs to be clarified, that is : the marked distinction between gambling, speculation and investment in the stock market. We shall address these in the following section.

⁵¹ Nevertheless, some jurists disagreed, arguing that the institution must be held responsible for bringing about such malpractices and hence, investing in the stock market should not be considered permissible. The argument is based on the concept of *Sadd al-Dhara'i* (blocking the means towards performing injustice) in the *Shari'ah*. See Kamali (1991).

6.7.2 Investment, Speculation and Gambling

It is true that the *Quran* has prohibited all forms of gambling, describing it as an abomination of Satan's handiwork, and considered it a social evil, bringing more harm than good. However, to consider professional investment and "informed speculation" on the stock market as forms of gambling may not be appropriate. Although unprofessional and random speculative behaviours of the investors are undesirable and generate erratic movements in the stock prices, these are inevitable moral and ethical problems of equity financing, which require some regulatory behavioural constraints in curbing them. Perhaps defining each of these terms would clarify their differences and determine the permissibility of speculating from the *Shari'ah* perspective.

In finance, *investment* is broadly defined as "the commitment of money to buy an asset for a period of time in order to derive an expected higher future returns". Keynes (1936) defined *speculation* as "the activity to forecast the psychology of the market" and has contrasted this with the activity of *enterprise* which he defined as "the activity of forecasting the prospective yields of assets over their whole life". On the other hand, *gambling* is the risky act or habit of betting money or assets in the hope of gaining returns with almost complete uncertainty of its outcome. The underlying object of a contract of gambling is the possibility of reaping a bigger sum of money as the winning prize (by one person or a group of people) and/or losing a small amount for participating in it. Apparently, it is inequitable and there are no associated activities of exchange or production of real goods or services involved.

Although some claim that investment equally involves uncertainty and/or risk-taking, in statistical terminology they are technically different⁵². Often uncertainty has

⁵² Risk is a situation whereby one can determine all the probable outcomes of an action and associate degrees of probability to each of them; in short, it is measurable based on preceding experiences or events. Hence risk is often measured in terms of standard deviation or variance. Unlike risk, uncertainty in gambling is often not measurable, even with the law of large numbers, except by some random guesswork.

been used interchangeably with risk, which by definition measures the variability of returns from an investment. In terms of Islamic financial transactions, uncertainty is considered to be of two forms : one is *risk-taking* and the other is *ambiguity* (which relates to all aspects of *gharar* explained earlier). While the former is legitimate, the latter is not permissible. Investment in the stock market involves risk-taking, for there is always the element of uncertainty about the future prices of the shares. That is, although the prices could well be forecasted (or speculated) in advance, they cannot be anticipated. On the other hand, a transaction which is completely ambiguous involves more than just risk-taking and cannot be justified, either in the conventional system or from the *Shari'ah* perspective.

However, it is often difficult to differentiate or determine the real aims of an investor because all the three activities (of investing, speculating, and gambling) involve the taking of some form of risk and expecting a return. Although investment itself must be undertaken in a morally acceptable manner, there is always the potential for immoral behaviours among market participants that needs to be appreciated. Indeed, there is no possibility of ensuring the exchange floor of the stock market to be free of a few irresponsible "investors" (or rather gamblers) that would gamble with the financial instruments.

Some observers suggested that the act of speculating with an immoral intent usually involves the buying of shares on the basis of their *potential selling price* rather than on the basis of some *companies' intrinsic* or *fundamental values*, and that the person is willing to take above-average risks to achieve above-average returns, over a relatively short period of time. Although in certain instances this may be true, here again it will be difficult to differentiate between what is termed as the share's potential selling price and the company's intrinsic value (which is rather subjective), in order to identify investors with moral and immoral intent. For instance, the *intrinsic value* of a company's share could either be measured from its market value, which is based on the investor's

expectation of the discounted value of future cash flows generated by that stock, or its accounting value which takes into account the historical cost of acquiring the assets.

Nevertheless, the issue that needs to be addressed is whether or not speculation is permissible in Islam. To the extent that speculation is an effort of determining the psychology of the market based on available information, and employing some tools or scientific techniques (such as charting or technical analysis)⁵³ to decide on an investment, it is by no means un-Islamic. Indeed, it is legitimate for an investor to profit from his information and knowledge (forecast), and/or to avoid losses, even if it involves a short period of time. On this basis, even *arbitraging* is permissible in Islam. Every investment activity involves the elements of risk and return, and the objective function of a rational investor (as a maximiser of utility)⁵⁴ would be to achieve maximum possible returns with minimum possible risk. The investor as an informed speculator usually calculates his acceptable degree of risk and determines his expected rate of return. There is no guarantee of him realising his expectation, and he has to some extent his own judgement to blame if it turns out otherwise. In short, from the *Shari'ah* perspective, we contend that there is no issue of prohibiting "speculative investment" in the manner described per se.

However, problems would arise when there exist a large number of ignorant and uninformed investors who speculate and dabble in the stock market without any specific aims, apart from wanting to make quick returns. These are typical of the undeveloped and newly emerging securities markets found in many Third World countries which lack

⁵³ In contrast to fundamental analysis, technical analysis attempts to determine the market forces at work on a certain security or on the securities market as a whole. It studies the relationships among security market variables such as price levels, trading volume, and price movements so as to gain insight into the supply and demand for securities. (See footnote 3 for fundamental analysis).

⁵⁴ It is obvious that the definition of a "rational investor" and the concept of "maximising utility" in Islam differs from the conventional perspective. The discussion is beyond the scope of our study. See Khan (1983) for literature on the subject.

depth and breadth, and trade in thin and volatile market environments⁵⁵. In these situations, the "unlawful speculation", coupled with margin purchases, short selling and contra trading has in fact generated erratic and unhealthy movements in stock prices. Apart from educating the market participants, the best prescription to curb such activities is to promote both the institutional investors and unit trusts investment schemes⁵⁶. While some commentators have suggested imposing certain form of discriminatory tax system and stamp duties between capital gains and dividend yields, we felt this would only impede the development and competitiveness of the market further.

6.8 Conclusion

This chapter continued the discussions from previous chapters by addressing one of the principal issues confronting the Bumiputera Muslims investors in Malaysia, that is, with regard to the *Shari'ah* injunctions on Muslims participating in the stock market. The relevance of the discussion was in relation to the growing concern of the Government that the Bumiputera Muslims in Malaysia might opt out of the economic activity in the capital market on religious grounds. In fact, the efforts to harness meaningful investible funds from the community to enhance their economic well-being, has been one of the main challenges for the Government for many years. In addition, there have also been increasing discussions among economists and observers who dispute the importance of promoting the stock market as means of achieving equitable distribution of wealth or corporate ownerships. The chapter has attempted to address both these issues by justifying, firstly the needs and economic functions of the stock

⁵⁵ See Wilson (1993).

⁵⁶ Detailed discussion of the unit trust schemes and the experiences of the Malaysian capital market in regulating and promoting the equity markets are found in the previous Chapters 4 and 5. Also see Wilson (1993 and 1995).

market in a modern economy; and secondly, its permissibility from the *Shari'ah* perspectives.

Earlier, we saw that apart from a few forbidden transactions, the *Shari'ah* has not prohibited the Muslims from engaging in stock market investment, especially when it brings benefits and does not inflict any harm upon them. Indeed, Islam encourages and directs its followers to seek the bounties of *Allah* and not to forsake material quest in this world. In fact, equity financing is by nature participatory and accords well with the principles of *Al-Mudharabah* and *Al-Musharakah*. The Muslims cannot afford to ignore the potentials of the capital market in raising their economic and financial positions. To disregard the stock market is also to neglect the economic power of the private sector and its attendant power of wealth creation and prosperity, employment and training opportunities, economic knowledge and technology, and global economic relations.

It is thus imperative for the Muslims in general and the Bumiputera Muslims in particular, to appreciate the objectives (*maqasid*) and underlying concepts of the *Shari'ah* when faced with today's economic challenges. The dynamism of the *Shari'ah* is reflected in its capacity for continuous application and refinement, pragmatism and convenience, rather than a guidance of rigidity and fear. In fact, the latter would contravene the numerous *Quranic* directives on alleviation of hardships from the people. In certain instances, Muslim economists need to employ independent reasoning (*ijtihad*) in light of the basic guidelines of the *Quran* and the *Sunnah* to resolve issues.

A stock market, as part of the capital markets, performs a number of important economic and financial functions. Collectively, they are mechanisms which facilitate the transfer of investible funds from economic agents in financial surplus to those in financial deficits. The stock exchange provides a forum for buyers and sellers to conduct business transactions in different types of companies' securities. The activities of buying and selling these securities are extremely important for the efficient allocation of capital

within economies. It has been generally recognised that the development of capital markets is fundamental in promoting economic growth. An efficient and well-developed capital market provides an effective means of mobilising savings and channelling financial resources for productive investment activities.

The benefits of having a well-developed capital market cannot be over-emphasised. Nevertheless, developing the capital markets are not without cost. These include the inevitability of market cycles, interest and exchange rates fluctuations, instability of money flows, intermediation costs, the need for additional regulation, possibilities of unhealthy speculative and dishonest activities such as insider trading, market-rigging, and many others. However, in sum, the benefits of the markets outweigh their costs; and the inherent problems could be overcome with proper policy, regulation and foresight.

According to the *Shari'ah* any financial transactions is considered permissible so long as it does not contain elements of *riba* (interest) and/or *gharar* (uncertainty or ambiguity). Although the definition of *riba* is absolute, the concept of *gharar* has been the subject of several disputes among the many Muslim jurists. While some hold to the principle of not permitting the sale of something which one does not possess, others contend that the prohibition of such sales lies in the fear of disputes due to the risk or uncertainty in the ability of the vendor to deliver the object of the sale. In other words, the rationale for the prohibition was to prevent conflicts, exploitation and injustice among people. Such problems do not relate to modern market reality.

We also noted the competing opinions on the issues of contra trading, margin purchase, short selling, speculation, arbitraging and the like. However, based on the objectives of the *Shari'ah* and all preceding arguments, we conclude that, provided there exist no elements of *riba* (interest), *maysir* (gambling), and *gharar* (uncertainty leading to exploitation, fraud and injustice) in the contract between the consenting parties of the

buyers and the sellers, there are no reasons to believe that investing in the stock market (of companies whose nature of business are not prohibited in Islam), should be regarded as unlawful from the *Shari'ah* perspective.

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CHAPTER 7

RESEARCH METHODOLOGY AND SURVEY DESIGN

7.1 Introduction

While chapter six examined some competing *Shari'ah* views on the limits and permissibility of the Muslims to participate in stock market investment, most of the previous chapters have attempted to analyse the financial position of the Bumiputera Muslims in Malaysia. This was appraised in relation to the growth and development of the country's economy and its financial system over the last few decades. The main focus was to expose the issues of having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and consequently the problem of an inequitable distribution of share capital ownership among the various ethnic communities in the corporate sector. This underlies the motivation for the research, which include : firstly, to analyse the underlying reasons for the lack of interest and response from the community in capital market investment, and secondly, to explore the means and possibility of redressing the balance of equity ownership in the country.

Earlier, we have seen the economic progress and development of Malaysia which registered an encouraging average annual growth rate of more than 8.7% for the past seven consecutive years (between 1988 and 1994 inclusive). Meanwhile, the capital market has developed in tandem with the economic growth, and the Kuala Lumpur Stock Exchange has expanded from an insignificant entity of the financial system into the largest bourse in South-East Asia with market capitalisation exceeding RM500 billion (£127.3 billion) at the end of 1994.

Nevertheless, despite such a significant achievement, it remains quite perplexing to understand that after almost twenty-five years of efforts and measures undertaken, the Government has still not been able to achieve the New Economic Policy's target of acquiring 30% of total equity in the corporate sector for the Bumiputera community. As we have seen in chapter five, a plethora of policies and reforms have been introduced, including the granting of direct assistance, training, education and incentives for the Bumiputera Muslims in order to encourage them to participate actively both in the stock market as well as in the small and medium-sized business sectors. However, the response has not been encouraging. Several researches have been conducted to identify the underlying issues and problems facing the Bumiputera Muslims, but we felt there has yet to be a comprehensive study that examines the role religion plays in influencing the attitude of these potential Bumiputera Muslim investors.

Apart from the efforts being made to redress the economic balance, the Government is also concerned to ensure that the increasing Islamic awareness among the new affluent and educated Bumiputera Muslims community does not jeopardise its long term objective of achieving the status of an industrialised nation by the year 2020. While moderation is welcome, religious parochialism and extremism are rejected as these have been regarded as obstacles to modernisation and progress. It was thus emphasised in the Vision 2020¹ mission statement that the objective must be accomplished in an environment of balanced spiritual, moral and material developments within a policy of fair opportunities and equitable wealth distribution among all ethnic groups.

Apart from responding to the religious call, the Government also recognises that Islam in itself could prove to be a driving force to spur the Bumiputera Muslims to engage themselves in several important economic activities including capital market

¹ As explained in Chapter 2.

investment. To date, several Islamic financial instruments have been introduced by the existing conventional commercial banks (under the interest-free banking scheme) which currently operate a dual-banking system. The Islamic money-market, claimed to be the first of its nature in the world, has also been introduced and it is expected that the next move would be to establish an Islamic capital market. Although theoretically, the possibility of establishing such an institution in Malaysia does exist, the effort would only prove to be worthwhile if there was to be an equally significant and meaningful response from both the Muslim individual investors and, in particular, the private sector. Thus there is a need to provide empirical evidence to determine, for instance, whether the offerings of Islamic investment instruments (such as the Islamic unit trusts) would encourage and influence the savings and investment patterns of the Bumiputera Muslims, and secondly, whether the establishment of an Islamic capital market would offer a viable and competing alternative for the corporate sector to choose from. Hence the *raison d'être* for the research.

The objective of this chapter is to describe the research methodology employed, and the design of the field survey that was conducted between June and August 1993. This chapter has been organised into seven sections. The next section attempts to explain the principles guiding this research, its strengths, drawbacks and the precautions that need to be considered in drawing inferences from the statistical tests. This is followed by section three which describes the research objectives, hypotheses and conceptual model to be tested, along with the issues of measurements and empirical associations between variables. Section four provides detail on the research method and design, while section five explains the sampling technique adopted in conducting the fieldwork and the rationale for choosing the method. Section six describes the questionnaire design and the pilot test conducted prior to the fieldwork, and finally, the last section discusses the data preparation and statistical tools employed in arriving at the results. In the next three chapters we shall elaborate on the findings and analyses from the field survey.

7.2 The Principles of Social Research

7.2.1 The Nature of Inquiry

The means by which a researcher or a social scientist sets out to comprehend the nature of his environment or the socio-economic phenomena around him may be classified into three broad categories, namely, *experience, reasoning and research*². Far from being independent and mutually exclusive, however, these categories must be seen as complementary and overlapping. The first of these categories, *experience*, does itself subsume a number of sources of information that may be called upon in a problem-solving situation. The one most immediately at hand for most people is personal experience. However, the limitations of personal experience in the form of "common-sense knowing", can quickly be exposed when compared with features of the scientific approach to problem-solving.

Consider, for example, the striking differences in the way in which theories are used. While a non-scientific approach would base the theories on haphazard events and uses them in a loose and uncritical manner, the social scientist, by contrast, constructs his theories carefully and systematically. Whatever hypotheses he formulates have to be tested empirically so that his explanations have a firm basis in facts. There is also the element of control for any extraneous sources of influence when trying to explain an occurrence, resorting to definite techniques and procedures to isolate and test the effect of one or more of the alleged causes. In addition, it warrants a professional approach in arriving at conclusions, employing rigorous experimentation before postulating any relationships among variables or phenomena.

² See Babbie (1990), Hirschi and Selvin (1973) and Mouly (1978).

Such is the foundation of social science which is sometimes characterised as *logico-empirical*, bearing two main pillars, namely *logic* or *rationality*, and *observation*. A scientific understanding of any phenomena must make sense and correspond with what we observe. Both of these are essential to science and relate to three major aspects of the overall scientific enterprise, namely, *theory*, *research methods* and *statistics*. As a gross generalisation, theory deals with the logical aspects, research methods deal with the observational aspect, and statistics offer a device for comparing what is logically expected with what is actually observed.

The second category, *reasoning*, by means of which the researcher attempts to understand the phenomena around him consists of three types, namely, deductive, inductive and the combined inductive-deductive approach.

We define *induction* as the process of reasoning from particular instances to general principles, from facts to theories; that is, from a set of observations we attempt to identify a pattern using some statistical tools before drawing a tentative conclusion. On the other hand, *deduction* refers to the process of reasoning from the general to the particular, applying a theory to a particular case; that is, from a constructed hypothesis, we conduct an observation of the objects followed by its statistical tests to either accept or reject the hypothesis. In short, in induction one starts from observed data and develops a generalisation which explains the relationships between the objects observed; while in deductive reasoning one starts from some general law and applies it to a particular instance. In this regard, the research undertaken employs both the processes back and forth at different stages of the study. We shall elaborate the matter further when discussing the research method and design in a later section.

Finally, the third means by which we discover truth is *research*. This has been defined by Kerlinger (1970) as the systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among natural

phenomena. Research is perhaps best conceived as a process of arriving at dependable solutions to problems through the planned and systematic collection, analysis and interpretation of data. Basically, it bears two important characteristics : firstly, it is systematic, and secondly, it follows a scientific method of inquiry³. We shall next look at the stages involved in the research process.

7.2.2 The Research Process

Perhaps there are as many descriptions of the research process as there are authors on social research method⁴. However, generally many tend to adopt the traditional deductive model based on the following steps :

1. *Theory Construction*. The starting point for most research process is the theoretical domain. Faced with an aspect of the social phenomena that we intend to examine, we create an abstract deductive theory to describe it.

2. *Derivation of Theoretical Hypothesis*. On the basis of this theory, we derive hypotheses relating to the various concepts composing the theory. Hypotheses very often take the form of relationships between two or more entities - in this case, the level of investments in the stock market relative to a set of independent variables such as income, attitude, etc. These entities are usually referred to as "concepts" - that is, categories in which our ideas and observations about common elements in the world are stored.

3. *Operationalisation of Concepts*. The next step is the specification of empirical indicators to represent the theoretical concepts. In order to assess the validity of a

³ See Kaplan (1964).

⁴ For examples, see Bryman and Cramer (1990), De Vaus (1993) and Marsh (1982).

hypothesis, it is necessary to develop measures of such constituent concepts. It is this process that is often referred to as operationalisation. In effect, what is happening here is simply the translation of the concepts into variables - that is, translating abstract concepts (such as risk level, attitude, religiosity, etc.) into something more concrete and directly observable.

4. *Selection of Respondents or Subjects - Sampling Frame.* If a survey investigation is being undertaken, as in this research, we must find the relevant people to whom the devised research instrument (for example, the self-administered questionnaire) should be administered. It is important to find a good representative sample in order to be able to generalise to a wider population.

5. *Setting up a Research Design.* The next step is to set up a research design such as the survey, correlational or experimental designs. The nature of the research design has implications for the kinds of statistical manipulation that can be performed on the resulting data.

6. *Collection of Empirical Data.* Based on the operationalisation of theoretical concepts, we collect data relating to the empirical indicators.

7. *Empirical Testing of Hypotheses - the Analysis.* Once the data have been collected, the final step is the analyses and statistical testing of the hypothesis. The confirmation or disconfirmation of the empirical hypothesis is then used for purposes of accepting or rejecting the theoretical hypothesis. Data are also analysed to see how much support there is for the testable and conceptual propositions as well as for the initial theory.

To this, Bryman and Cramer (1990) closed the process-loop by adding, if the analysis of the data suggests that a hypothesis is confirmed, this results can be fed back

into the theory that prompted it. Future researchers can then concern themselves either with seeking to replicate the finding or with other ramifications of the theory. However, the refutation of a hypothesis can be just as important in that it may suggest that the theory is faulty or at the very least in need of revision. It is thus significant for us to understand whether the work undertaken is an attempt towards constructing a new theory or testing a hypothesised or an established theory.

7.2.3 Theory Construction and Theory Testing

De Vaus (1993) claimed that social researchers normally attempt to answer two fundamental questions about society. *What* is going on (descriptive research), and *why* is it going on (explanatory research). The development of good explanations involves the two related processes, namely, theory construction and theory testing.

Theory construction is a process which begins with a set of observations (that is, description) and moves on to develop theories of these observations. It is also called grounded theory because it is based on observations rather than mere speculation. Others call it *post factum* theory or *ex post facto* theory since the theory comes after the observation rather than before⁵. Theory testing, on the other hand, differs in that it starts with a theory. Using the theory, we predict how things will be in the "real" world.

De Vaus (1993) describes theory construction as the inductive approach because it is the process by which we develop explanations by moving from the particular to the general, that is, from a set of observations to a generalised theory. However, theories or explanations arrived at in this way are not the end in itself. Where the process of theory construction ends, the stage of theory testing begins, that is, a deductive approach moving from the generalised theory to some sets of particular observations collected.

⁵ See Merton (1968).

Often it is very difficult to describe or identify whether one is theory testing or theory constructing because the logic of the research process involves the shuttling back and forth between theory and observations. For example, in the research undertaken, to the extent that we are analysing the phenomena of low participation of the Bumiputera Muslims in the stock market in Malaysia, we are attempting to construct or build a theory. However, to the extent that we are evaluating the validity of the claim that adherence to the Islamic *Shari'ah* (or the strength of their Islamic convictions) has prevented the Bumiputera Muslims from investing in the stock market, we are in fact theory-testing. It is thus interesting to appreciate the nature of causation in designing research method.

7.2.4 Causality and Research Design

One of the main aims of many quantitative research in the social sciences is to explain *why things are the way they are*, that is, to demonstrate causality that one variable has an impact upon another. The terms independent and dependent variables are often employed in this context. This causal imagery is widespread in the social sciences and a major role of multivariate analysis is the elucidation of such causal relationships⁶. The ease with which a researcher can establish cause-and-effect relationships is strongly affected by the nature of the research design. Later we shall see that the effort to demonstrate causality constitutes a considerable problem for non-experimental research designs such as the correlational or survey research.

To say that something causes something else is not to suggest that the dependent variable (the effect) is totally influenced by the independent variable (the cause). In other words, "cause" here should not be taken to mean that variation in the dependent variable is affected by variation in the independent variable. Sometimes there is a third

⁶ See Bryman (1988).

variable called the intervening variable which is the means by which the independent variable affects the dependent variable. In order to establish a causal relationship, three criteria have to be fulfilled. First, it is necessary to establish that there is an apparent relationship between two variables. This means that it is necessary to demonstrate that the distribution of values of one variable corresponds to the distribution of values of another variable⁷.

Second, it is necessary to demonstrate that the relationship is non-spurious. A spurious relationship occurs when there is not a "true" relationship between two variables that appear to be connected. The variation exhibited by each variable is affected by a common variable. Third, it is necessary to establish that the cause precedes the effect, that is, the *time order* of the two related variables. An effect simply cannot come before a cause. In descriptive research, for example, the time order is often very difficult to be identified as compared to an experimental design.

Having discussed some fundamental issues of a scientific method of social research, we now turn to the research objectives, hypothesis and construction of the model to be tested.

7.3 Research Objectives

To recapitulate, the objectives of the research are as follows.

Firstly, to examine the financial position of the Bumiputera Muslims in Malaysia in relation to the growth and development of the country's economy and its financial system over the last few decades. It seeks to analyse the state of financial affairs of the community, and to appraise the potential and prospect of enhancing their

⁷ See Bryman and Cramer (1990) and Hellivik (1984).

involvement in the capital market in order to redress the economic balance and equitable distribution of share capital ownership among the various ethnic groups in the country.

Secondly, to examine the Bumiputera Muslims' attitudes toward savings and investment in the capital market, as well as their preferences in investment alternatives and approach towards risk. It attempts to identify the probable causes, problems and issues that have impeded the community's ability to achieve and sustain a sizeable proportion of equity ownership relative to the other communities.

Thirdly, to explore some possible alternatives which might enhance the mobilisation and efficient allocation of the Bumiputera Muslims' financial resources for investment in the Malaysian capital market. It seeks to evaluate the feasibility and economic viability of introducing Islamic investment instruments as a means of increasing the community's equity ownership in the corporate sector.

Fourth, and finally, to examine some competing *Shari'ah* views of Muslim scholars and jurists on the limits and permissibility for the Muslims to participate in stock market investment. It aims to evaluate these arguments in the light of the social and economic environment of Malaysia, and attempts to offer some prescriptions and encouragements for the Bumiputera Muslims to increase their investment participation in the capital market, in accordance with the Islamic principles.

While the last objective has already been dealt with in the previous chapter, the remaining three require both primary and secondary data from the target group before any statistical analysis can be conducted. Although a considerable amount of secondary information has been used (in most of the earlier chapters) in exploring the potential and prospect of enhancing the Bumiputera Muslims involvement in the Malaysian capital market, we may still need to gather fresh primary data and other related complementary information from the community. This will enable us to determine their current state of

affairs and to draw some conclusions from the study based on latest empirical evidence. The gathering of the primary data was done after conducting a pilot-study, followed by a more structured and refined planning in designing the field research. The actual field survey was carried out with extreme care as it would be costly to fail to capture the right information. This will be described further in sections five and six.

7.3.1 Hypotheses

In essence, the main thrust of the study rests upon the tasks of, firstly, analysing the underlying reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and secondly, exploring the means and possibility of redressing the balance of equity distribution (or share capital ownership) among the various communities in the Malaysian corporate sector. Some observers believed that the introduction of an alternative Islamic-based stock market, operating within an Islamic financial system, could have greater appeal to the Bumiputera Muslim investors, and in turn influence the volume of response among them. However, based on earlier experiences, we felt it was quite unlikely that the absence of an Islamic alternative system (or the issue of religious convictions) was the dominant factor hindering the Bumiputera Muslims participation in the stock market. We believed there were several other (equally important) possible reasons, that could be offered to explain the situation.

Thus, it is necessary for us to investigate and understand several issues relating to the community in order to arrive at some conclusions to the problem. These include the need to examine the determinants of savings and investment among the Bumiputera Muslims; their patterns of savings and consumption; educational background and income distribution; attitude towards risk and returns in investment; preference between short-term capital gains and long-term growth and dividend yields; religious

commitments in business transactions or investment; and finally, their willingness to sacrifice the benefits of experiencing (presumably) higher returns from investment in a "non-Islamic portfolio", relative to the lower returns from a "constrained investment portfolio" that observed the *Shari'ah* rulings.

Prior to constructing a testable hypothesis, we first need to develop an abstract hypothetical theory based on all available information and past experiences. For instance, it was a common notion that the issue of having a skewed distribution of share capital ownership among the various ethnic groups in Malaysia was generally caused by the lack of interest and involvement of the Bumiputera Muslims community in the capital market. After considering all the relevant secondary information associated with the issue, we then construct the hypothetical theory as follows :

"Among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market include issues of their :-

1. insufficient net household disposable income (to make a worthwhile capital market investment)⁸ ;
2. deep rooted customs and community norms for having preference and giving priority to investing in houses and land rather than the riskier corporate shares;
3. attitude towards risks, (in which the Bumiputera Muslims are known for being highly risk-averse in investment relative to the non-Bumiputeras);

⁸ See Chapters 4 and 5 to appreciate the economical size of investible capital in the KLSE, taking into consideration the transaction costs involved and the need to achieve portfolio diversification and risk reduction in an investment.

4. lack of knowledge and appreciation of the role of the capital market in economic development;

5. religious convictions that participating in the conventional speculative stock market is similar to gambling in a casino which is not permissible in Islam.

We are therefore to test each of the above factors and determine its validity or otherwise in influencing the level of capital market involvement of the Bumiputera Muslims in Malaysia. Constructing such a test requires very rigorous methods, hence we attempt to employ several statistical tools. The objective is to prove or disprove the specific hypothesis with the use of testable empirical models.

A *hypothesis* may be defined as the tentative proposition suggested as a solution to a problem or an explanation of some observed state of affairs. It is a statement of the researcher's expectations about a relationship between variables within a problem. Based on the hypothetical theory above, we then construct our hypothesis as follows :

" The issue of inequitable distribution of the share capital ownership in the Malaysian capital market for the Bumiputera Muslims could be overcome through some of the following means : -

(i) inculcation of good savings habits and positive investment attitudes among the Bumiputera Muslims so as for them to appreciate risk in investment and the economic potential of the capital market as a significant engine of growth for long term economic well-being of the community;

(ii) offerings of Islamic investment instruments (such as the Islamic unit trusts) and the introduction of some specific Government policies that would encourage and influence the savings and investment patterns of the Bumiputera Muslims;

(iii) *educating and elucidating the Bumiputera Muslim community on the permissibility of stock market investment from the Shari'ah perspective.*

7.3.2 The Model

A model is an expression of a theory or set of hypotheses which attempts to explain the connections and interrelationships between social phenomena. Models are made up of *concepts* and *relationships* between concepts⁹. Thus, having outlined the hypothesis above, we next construct a testable empirical model which will enable us to focus on each of the specific factors or concepts identified, to test for any possible relationships :

$$Y_i \cong \text{fn} (\alpha + \sum \beta_n X_n + e), \text{ where } i = 1 \text{ to } 2; n = 1 \text{ to } 6; \text{ and}$$

Y_i = respondent's level of investment/involvement in the stock market,
represented by

Y_1 = respondent's percentage of total investment in stocks and shares, and

Y_2 = respondent's average market value of all their shares¹⁰.

The independent variables X_1 to X_6 refer to the followings :

X_1 = gross household income;

X_2 = consumption and savings attitude;

X_3 = investment's attitude;

X_4 = educational background/knowledge of the stock market;

X_5 = level of risk preference/averse (that is, risk attitude);

X_6 = level of religious convictions/conscience; and

α = some constant value;

β_n = the respective coefficient of the independent variables X_1 to X_6 ;

e = some unexplained phenomena that have direct influence on the investors interest in risky assets.

⁹ See Gilbert (1993 and 1982).

¹⁰ Although the market value of their shares might have appreciated/depreciated over time due to market price fluctuation, it was thought to be the best proxy (available within the questionnaire) for gauging the amount of money the respondent would have invested. An earlier effort through a pilot-study to obtain a better variable, did not receive meaningful response, hence the choice.

Although the best approach to analyse the model would be to employ the regression technique, the nature of the variables involved did not permit us to do so. Parametric regression analysis would require the variables to be at the interval level of measurement and thus it would be meaningless to construct a regression model if the variables involved are nominal and ordinal. More on the levels of measurement will be discussed later. However there are several other statistical tools that have been developed over the years to tackle these problems. For example, apart from the strength of non-parametric measures of association on crosstabulations, it is also possible to employ some advanced techniques such as factor analysis and the hierarchical loglinear analysis to draw some conclusions from the data set.

Factor analysis is a way of determining the nature of underlying variables among a large number of measures¹¹. It is particularly appropriate in exploratory research where the investigator aims to impose an "orderly simplification" upon a number of interrelated measures. It allows the researcher to check whether, for example, all of the indicators developed are really related to each other and not to indicators that are supposed to measure other dimensions. Further discussion on the various statistical tools employed will be dealt with in the following three chapters. Next we shall look at some issues of measurement and association in relation to the use of the model's equations.

7.3.3 Model and Associations

In the previous section, we constructed a model to provide a guide to identify the specific indicators of the concepts to be examined. However there are some limitations that need to be noted. If, for example, we collected data using these indicators and found that the data showed a direct relationship between the two sides of the equation, this could then be taken as evidence that the model is correct. We would have found a

¹¹ See Child (1970).

structural correspondence between the relationship proposed in the model and the relationship discovered in the data. The model can then be used to make predictions about how the "*real world*" will respond to any changes such as institutional reforms or policy changes. Moreover, the relationships specified in the model will also serve as an explanation of how the "*real world*" works.

Nevertheless, Gilbert (1993) explained that it is necessary to be rather cautious about jumping to the conclusion that a model is a correct representation of the world from the discovery of the structural correspondence alone. Such correspondence only provides evidence in support of the model, but not definite confirmation of its validity. This is because the chain of argument leading to a demonstration of correspondence is a long and fairly complicated one, involving the derivation of a model from theory, the choice of indicators appropriate for testing the model, the collection of data using those indicators, and finally, a decision on whether correspondence has or has not been found. There is room for error in each of these steps.

As Gilbert (1993) pointed out, inevitably all models are simplified representations of the "*real world*". If models can be thought of as being located in an "*imaginary world*", the problem of establishing structural correspondence is therefore reduced to the problem of comparing the "*real*" and the "*imaginary*" worlds. The comparison is performed by making measurements in both worlds. Data from the "*real world*" are obtained by observations, questionnaires and other collection procedures. Data from the "*imaginary world*" are obtained using data analysis techniques such as regression, factor analysis, loglinear analysis or whatever is appropriate. Thus we obtain two data sets, one from the real observation and the other from the analytic technique. If they differ or fail the tests, this is evidence that the model is incorrect. However, if they correspond or are identical to each other (or are at least sufficiently nearly identical), then the model may correctly represent the true state of affairs.

Although the process seems quite straightforward, in practice there are other teething problems that prevent the easy application of the model in itself. We mentioned earlier the issue of correct identification of the indicators. In reality, theoretical concepts seldom, if ever, permit unambiguous operationalisation. Since concepts are abstract and general, every specification of empirical indicators must then be an approximation. For example, the specification of empirical indicators to represent the respondents' levels of religious consciousness, their attitudes toward risk, their investments behaviour or their appreciation of the stock market in our model were all, but an approximation. As such, there is a need for considerable cautious in arriving at any conclusion.

Secondly, the empirical associations between variables are almost never perfect. Ultimately, we tend to use imperfect indicators of theoretical concepts to discover imperfect associations, and these imperfections conspire with one another against us in our effort to draw valid and reliable conclusions. For example, suppose we specify a degree of association that will constitute acceptance of the hypothesis, and the empirical analysis falls short. We would quite naturally ask ourselves whether different indicators of the concepts might have produced the specified extent of association. Thus measurement and association are interrelated concepts which must be handled simultaneously and logically. Some social scientists suggested that rather than moving through a fixed set of steps, we need to move back and forth through them endlessly.

The next section describes the research method, research instrument and data collection procedures drawn up to conduct the actual research, and provides the rationale for their selections.

7.4 Research Method and Design

The aim of research methodology is to help us understand, in the broadest possible terms, not the products of scientific enquiry but the process itself. Methods refer to the range of approaches used to gather data which are to be used as a basis for inference and interpretation for explanation and prediction. In short, methods refer to the techniques and procedures used in the process of data gathering. The nature of our research is both descriptive and explanatory, dealing with questions of *what* things are like and *why* (possibly) they are that way. The method used in data collection is the *survey research design*, employing the *self-administered close-ended questionnaire* as the research instrument. In order to justify the selection of such a method, we shall briefly describe the options available.

7.4.1 Types of Research

In general, research may be classified as *historical*, *correlational* or *cross-sectional*, *ex-post facto*, *experimental* and *descriptive*. Some authors have even reclassified them under several other categories but the discussion is not relevant here. However it is important to note that each of these methods has its own purpose and area of application¹².

The purpose of *historical research* for example, is to arrive at conclusions concerning trends, causes or effects of past occurrences which may help in explaining present events and anticipating future events. *Correlational study* on the other hand, aims at determining the degree of relationship between two or more quantifiable variables. It is also able to predict scores of a variable on the basis of the scores of other variables. Some authors even consider this method as similar to *descriptive*. Meanwhile,

¹² See Bailey (1978).

in *ex-post facto* research, both the effect and the alleged cause have already occurred and are studied by the researcher in retrospect. Finally, in *experimental* research, the primary characteristic is the manipulation of at least one variable and control over the other relevant variables so as to measure its effect on the dependent variables. The fundamental difference between descriptive and experimental research is that in the former, the researcher accounts for what has already occurred, while in the latter, he arranges for events to happen. It is for this reason that the issue of causality is best addressed by the experimental method.

7.4.1.2 Descriptive Research - Survey Design

According to Best (1970), descriptive research is concerned with "conditions or relationships that exists; practices that prevail; beliefs, points of views, or attitudes that are held; processes that are going on; effects that are being felt; or trends that are developing. At times, descriptive research is concerned with how "*what is*" or "*what exists*", is related to some preceding event that has influenced or affected a present condition or event."

Among the most commonly used method for data collection in descriptive research is the survey method. Typically, the *survey method* is most appropriate when it is required to gather data at a particular point in time with the intention of :

- (i) describing the nature of an existing phenomena;
- (ii) justifying current conditions and practices or identifying the problems;
- (iii) making comparisons and evaluations with other situations.

Since this is the nature of our research, hence the choice of the survey method. The next stage is to determine the population and sampling technique in selecting the

representative sample for our analysis. However, prior to this we need to identify the most effective and relevant research instrument to be used in our data collection process.

7.4.2 Research Instrument - Questionnaires

Perhaps one of the most far-reaching decisions a researcher must make is in the way the data is to be collected. There are in fact, many specific considerations for selecting a specific instrument. It is similar to the selection of tools by the construction worker for use in performing a task whereby, for each task a tool must be chosen that fits the particular need. In research, there must be a match between the instrument and the research method. In this study, after identifying the indicators of our theoretical concepts as well as the nature of respondents to be included in our sample, we have selected the *self-administered closed-ended questionnaire* as our instrument of data collection. This is considered to be the best tool among those available to perform the required task within the constraints of our financial resources and time. The questionnaire is also the most widely used technique, especially in survey research. It is a highly structured data collection method whereby each respondent is posed with the same set of questions. This feature provides a very efficient way of creating a variable by case matrix for large samples.

Apart from the questionnaires, there are also several other types of instruments that researchers frequently use, namely, the interview schedule, the observation form, opinionaires scales, the document analysis form, content analysis and many others. Some even suggested the combination of any of these methods where applicable. However, it is important to note there are conditions under which each of these data collection approaches is best utilised. We shall briefly outline some of the major issues that need to be considered.

Fowler (1988) for example, has suggested the following issues :

(i) *Sampling*. The way a researcher plans to draw a sample is closely related to the manner the data is to be collected. Certain kinds of sampling approaches make it easy or difficult to use one or other data collection strategy. For example, if one is sampling from a set of detailed addresses, then it is obvious that mail procedures, telephone interviews or personal interviews may all be feasible. However, if the sampling includes respondents from the rural areas, where no specific addresses are associated with the housing units, then mail survey may pose a problem.

(ii) *Type of Population*. The rate of literacy of the population, their educational background and motivation to cooperate with the researcher are salient considerations in selecting our instrument. Self-administered approaches for example, would require a certain level of aptitude on the part of the respondents to ensure reliable response to the questions posed. On the other hand, for mail surveys, it is often difficult to get people to return completed questionnaire unless they are highly motivated or interested in the research undertaken.

(iii) *Question Form*. Generally speaking, if one is to going to have a self-administered questionnaire, a closed-ended form is recommended, that is, questions that can be answered by simply checking a box from a set of answers provided by the researcher. The study selected this particular form for two reasons. Firstly, asking people to answer questions in their own words increases the difficulty of their task, which will eventually affect the rate of their responses. Secondly, and more importantly, self-administered open answers often do not produce useful data. Hence the answers will not be comparable across respondents and they will be very difficult to code.

(iii) *Question Content*. Researchers have argued that the nature of the questions posed does play a role in determining the data collection method. For example, when

dealing with questions of sensitive topics, self-administered procedures are thought to be best because the respondent will feel free in selecting his answer and does not have to admit directly to an interviewer a socially undesirable or negatively valued characteristic or behaviour. An objective response for such question may prove to be quite difficult if the mode of collection is through personal interviewing. As the questionnaire designed for this study does include several personal questions, this was again another reason for our choice of having it self-administered.

(iv) *Others*. Other factors include the acceptable response rate, costs, resources, facilities as well as the time available. Each of these need to be considered carefully before making the final decision.

Next, we shall discuss the sampling technique used to select the representative sample of the population before elaborating on the questionnaire design.

7.5 Population and Sample Design

In most research and survey work, the issue of population and sampling is very important because it is often the case that we do not have sufficient time and resources to conduct research on all of those individuals who could potentially be included in the study. Thus we select a representative sample of the whole population to enable us to draw statistical inference on the population parameters from the sample statistics. A representative sample is a sample that accurately reflects the nature and characteristics of its population. Hence the "population" needs to be precisely defined and carefully specified according to the research objectives because the results will depend on the definition adopted¹³. Here, the term "population" is used in the technical sense of the totality of the elements under study, where the "elements" are the units of analysis. Once

¹³ See Kalton (1983).

the population has been defined, the question of taking a sample from it can be addressed.

The subject of sample design is concerned with the technique of selecting this part of the population to be included in the survey. It is unlikely however, that a perfect representative sample can be drawn easily. By chance alone, there will be differences between the sample and the population, due partly to *sampling error*. However, this error can be considerably minimised by way of *probability sampling*¹⁴. With probability sampling, each unit of a population has a specifiable probability of inclusion in a sample. In the basic forms of probability sampling, such as the *simple random sampling*, each unit will have an equal probability of inclusion. Consequently, selection biases are avoided. If the sample is unrepresentative, then our ability to generalise our findings to the population from which it was selected is sharply curtailed. If we do generalise, then our inferences may be incorrect. However, there are situations when a sample can be selected in a biased manner, that is, in a *non-probability sampling* method. This biased sampling technique, such as the purposive sampling and quota sampling are sometimes useful and practical when one arbitrarily picks out a sample in relation to some criteria to be considered important for a particular study¹⁵. However, in this study, our concern is to select a good representative sample, hence our focus is on probability sampling rather than the latter.

There is a variety of probability sampling techniques that have been developed to provide efficient sample designs. Among the most widely used are the simple random sampling, systematic sampling, stratified random sampling, the (area) cluster sampling and the multistage (area) cluster sampling. In practice, these techniques are sometimes employed in combinations rather than separately. For example in this study, we

¹⁴ For further discussions see Bryman and Cramer (1990) De Vaus (1993) and Kalton (1983).

¹⁵ See UTM (1989).

employed the combination of the *stratified random technique* with the *multi-stage (area) cluster sampling*. The manner this is done and the rationale for such an approach is discussed following a brief outline on the characteristics of the different sampling techniques mentioned¹⁶.

7.5.1 Characteristics of Sampling Techniques

1. *Simple Random Sampling*. This is the most basic type of probability sampling where each unit of the population has an equal probability of inclusion in the sample. The method involves selecting at random from a list of the population (the sampling frame), the required number of subjects for the sample. One problem associated with this particular method is that it requires a good sampling frame and this is not always readily available. For example, in our study the sampling frame would be the complete list of income earners of all Bumiputera Muslims of Malaysia. It would almost be an impossible task to obtain such a list within the constraints of time and funds available; besides it would involve a large area to survey. In other words, this technique is most appropriate when a good sampling frame exists and when the population is geographically concentrated or the data collection does not involve much travelling.

2. *Systematic Sampling*. This method is a modified form of simple random sampling. It involves selecting subjects from a population list in a systematic manner rather than a random fashion. The method saves a considerable amount of time and there is less variability in the sample. However there is the disadvantage of an increase in sampling error in the existence of some type of periodicity in the ordering of the population members.

¹⁶For detailed illustrations of each technique, see De Vaus (1993), Cohen (1989) or Kalton (1983).

3. *Stratified Random Sampling.* This method of sampling involves dividing the population into a number of strata, and samples are drawn independently or randomly from each stratum. The method is commonly used by many researchers because it offers an extra level of precision to the above two sampling techniques. However the problem with stratifying samples is that information on the stratifying variable is often unavailable. A stratifying variable is the characteristic on which we want to ensure correct representation in the sample. To obtain a good representative sample, the proportions of various groups in a sample should be the same as in the population. However, due to sampling error this will not always be possible. Nevertheless, sometimes this may not matter, but if the characteristic on which the sample is unrepresentative is related to the focus of the study, then we may tend to experience distortions.

4. *Multistage cluster sampling.* The problem with all the sampling techniques considered so far is that they do not deal very well with geographically dispersed populations. They are also of no direct help when drawing a sample in which no sampling frame is available. Multi-stage cluster sampling is an attempt to overcome these problems. It is a probability sampling that allows such geographically dispersed populations to be adequately covered, while simultaneously saving the researcher's time and costs.

The basic procedure in arriving at a final sample involves drawing several different sample clusters, that is areas of the geographical regions being covered. Initially, large areas are selected and then progressively smaller areas within the larger ones are sampled. Eventually, we end up with a sample of a specified area and then employ a method of selecting individuals from the selected cluster. If all elements in the selected clusters are included, this is termed as single-stage cluster sampling, but if further sampling is done on those selected clusters, it is then termed as multi-stage. When cluster sampling is based on certain geographical locations, it is referred to as

(area) cluster sampling. Very often the stratification method accompanies the sampling of clusters. Such was the method employed in this study, where stratified random sampling was used to select the sample after clusters were identified. The sampling process carried out in selecting the required sample will be discussed next.

7.5.2 The Sampling Process

The process of selecting an unbiased representative sample with minimal sampling error is a long and tedious one. However, the task needs to be conducted with care for a bad sample would only produce bad and inaccurate inferences. Churchill (1983) suggested six steps which were used as guides in drawing our required sample :

1. *Define the Population.* As mentioned at the outset, among others, the objective of our research was to analyse and appraise the level of participation and involvement of the Bumiputera Muslims the capital market of Malaysia. Since the focus of the study was on the Bumiputera Muslims, the elements or the units of analysis were obviously, the *Bumiputera Muslims*. Thus in an all-encompassing frame, we defined the population as "all Bumiputera citizens of Malaysia who profess Islam as their religion", irrespective of their ethnic groups, gender, dwelling area or any demographic factors. Although we did not indicate adult citizens, it was obvious that minors would not have been included in the frame.

As at June 1993¹⁷, the latest available data indicated that the total population of Malaysia was about 18.4 millions comprising about 11.4 million Bumiputeras, 5.4 million Chinese and 1.6 million Indians and other ethnic groups¹⁸. Of these the Muslims made up slightly more than 9.5 millions, with about 90 per cent of them

¹⁷ The field survey was conducted between June and August 1993.

¹⁸ Source : Survey Research Malaysia (1993). See Appendix A.

residing in West Malaysia. Here again, due to the constraints of time and costs, the remaining 10 per cent Bumiputera Muslims of East Malaysia was not included¹⁹. In short, *our initial population frame was about 8.6 million Bumiputera Muslims of West Malaysia* from which the sampling frame was to be identified.

2. Identify the Sampling Frame. The sampling frame refers to a list of all elements defined in the population above, from which the elements for the sample are to be drawn. Ideally, we should begin with the complete list of this group obtained from some sources such as the electoral rolls. However, apart from it being a monumental task, this is not a prerequisite to obtaining a good representative sample, provided our sampling technique is sound. For example, it would be reasonable to assume that most of those involved in the stock market would generally be urban-dwellers income-earners with adequate levels of educational background to appreciate shares or equity investment. This enabled us to narrow down the frame substantially to include only those working adults living in the capital cities and large towns of West Malaysia. Based on Survey Research Malaysia's (1993) demographic data of 1992²⁰, it was estimated that the total working population of urban Bumiputera Muslims was about 1.2 million. Hence the next stage was to determine the appropriate sample-size from this estimated figure, as well as the sampling procedure to select them.

3. Select the Sampling Procedure. As mentioned earlier, the sampling procedure selected to collect the sample data was the combination of multistage (area) cluster sampling with stratified random selection method. The geographical locations chosen were eleven states' capitals of West Malaysia (designated as urban) and the federal capital city of Kuala Lumpur. The next clusters identified were areas within each town with private institutions, public sector organisations and quasi-government agencies. We

¹⁹ Besides, there was no evidence to indicate any substantial or significant involvement of the Bumiputera Muslims of East Malaysia in the capital market.

²⁰ See Appendix A for detailed figures.

then identified the strata of respondents as follows : (i) permanent employee with basic monthly income of about RM1,500 (£375); (ii) those who achieved a minimum tertiary-level of education. The strata was independent of gender, age, occupation type, marital status, number of dependants, years of working, etc. The idea was to obtain a wide range of people with diverse backgrounds falling within the strata that reflected as much as possible the characteristics of the population parameters.

The choice for the income level was because : firstly, this amount falls within the middle-income bracket and was the average basic income for a fresh University graduate in the public sector, and secondly, it was (presumably) less likely for the lower-income bracket employees to have any substantial amount of savings or investment in the stock market (and, even if they do) to cause any significant impact on any potential policy changes as a consequence of the study. As for the education level, some of the questions posed require an appreciation of current social phenomena. Thus income alone is insufficient to understand and reflect the attitudes, mentality, reactions and religious convictions of the working Bumiputera Muslims community.

Having identified the strata for the sampling, we then need to know how many respondents to select from each of the clusters.

4. *Determine the Sample Size.* Besides fulfilling the requirement of a minimum number of cases in order to examine relationships within subgroups, the researcher must obtain an adequate sample size that will accurately represent the population under study. Whenever a sample does not, there exists sampling error. We shall discuss sampling error in a separate section below. Meanwhile, the required sample size depends on two key factors : firstly, the degree of accuracy we require for the sample, and secondly, the extent to which there is variation in the population in respect of the key characteristics of the study²¹.

²¹ See De Vaus (1993 : p.70).

Kalton (1983) suggested that in order to determine an appropriate sample size, it is first necessary to specify the degree of precision required for the estimator. This is a difficult task and initially the value is often overstated. Suppose, for instance, our initial specification calls for an estimator that is within 4% of the population percentage with 95% probability; in other words, the 95% confidence interval should be the sample percentage plus or minus 4%. This specification requires that $1.96 \text{ SE}(p) = 4\%$, where SE is the standard error and p is the sample percentage. Assuming initially the use of simple random sampling and ignoring the finite population correction term $(N-n/N-1)$, then $\text{SE}(p) \approx \sqrt{PQ/n'}$ where P is the population percentage, $Q = 100 - P$ and n' is the initial estimate of the sample size. Thus, replacing $\text{SE}(p)$ in the initial equation, we then have $n' = 1.96^2 PQ/4^2$. In order to determine n' , a value is needed for P . Since PQ is largest at $P = Q = 50\%$, a conservative choice is to set P equal to a percentage as close to 50% as is likely to occur. Assuming that this is our choice, (that is $P = 50\%$), we then obtain our initial estimate of the sample size $n' = 600$.

However, the above calculation assumes simple random sampling and a modification is needed for other sample designs. For example, for stratified multistage design, Kalton (1983) suggested multiplying n' by a factor of 1.3 resulting in a new sample size of 780²². Working within the constraints of time and resources, we opted for a sample size of 600 as a proxy for the latter design. Besides, considering that the sampling error at 95% confidence interval is approximately inversely proportional to the square root of the sample size, the difference in sampling error between 780 (sampling error = 3.6%) and 600 (sampling error = 4.1%) is marginal.

5. Select the Sample Elements. Having determined the sample size, identified the clusters and the strata, we were then ready to select the sample. This was done as follows : firstly, in order to gather 600 sets of responses, we prepared about 700 sets of

²² For detailed discussion, see Kalton (1983 : Chapter 11).

the questionnaire to accommodate for any loss, respondents' failure to respond or irrelevant respondents that were handed out by mistake. Secondly, in distributing the questionnaire, since it was designed to be self-administered, we had the choice of either mailing them or handing them out directly to the relevant respondents at the various places throughout the whole country. To ensure a high response rate, we opted for the latter and made arrangements for the questionnaires to be collected personally at a later date. Although this measure of returning to the offices to collect them was very time consuming (especially when the sampling area was the whole country) it was nevertheless both rewarding and effective. The efforts paid off when we obtained a high rate of response from the distribution. Of the 700 sets handed out, 575 were collected back in good order, to be included in our final analysis. This constituted about 82% response rate with a sampling error of about 4.17% at the 95% confidence interval.

6. *Collect the Data from the Designated Elements.* The field work was conducted between June and August 1993. In distributing the questionnaires, we made every effort to maintain objectivity to ensure unbiased results. However, it was almost impossible to obtain a proportionate distribution of respondents throughout the whole country. Besides, based on the fact that most of the high income-earners and serious share-market players normally reside in large cities with easy access to information and stock brokerage services, we concentrated our distributions on the capital city of Kuala Lumpur. Of the 575 sets of questionnaire collected, 383 sets (or 66.6%) came from Kuala Lumpur area while the remaining 192 (33.4%) were collected from the rest of the country.

7.5.3 Sampling Problems

Although the issue of determining the sample size has been dealt with, there are several common problems associated with sampling design and sampling error that must

be noted. The effects of the sample design on sampling errors are often unappreciated. It is common to see reports of confidence intervals that assume simple random sampling when the design was in fact clustered. Clustering normally produces higher sampling errors than the former, especially for variables that are more homogeneous within clusters than in the population as a whole.

Another common misconception is that the adequacy of a sample depends heavily on the fraction of the population included in that sample. Many believe that, somehow a choice of 5% or some percentage of a population will make a sample credible. Contrary to expectations, the size of the sample relative to the size of the population (n/N) is irrelevant to the issue of a sample's accuracy. Further, even the size of the population from which the sample is drawn is irrelevant and has virtually no impact on how well that sample is likely to describe the population. Thus our final sample of 575 is equally good to describe a population of either 12,000 or 1.2 million with the same degree of accuracy, assuming a common sampling design and procedure²³.

Although one can reduce the sample error by increasing the sample size, after a certain optimal level, increases in accuracy tend to tail off as sample size increases so that greater accuracy becomes economically unacceptable. For example, our current sampling error is about 4.1%; to reduce by 1%, we need to increase the sample size by 1100, which is almost double. Hence the final sample size will have to be a compromise between cost, time, accuracy and effectiveness in providing meaningful analysis.

²³ Further details are beyond the scope of our discussion. See Fowler (1988).

7.6 Questionnaire Design

As discussed earlier, there are several research instruments that could be used to collect survey data and we have selected the self-administered closed-ended questionnaire method as our instrument of measure. This section attempts to explain briefly some considerations on the art of constructing questionnaires, the pilot test conducted prior to the actual field-work and the summary content of the final questionnaire designed. An ideal questionnaire needs to be clear, unambiguous and uniformly workable. Its design must not only minimise potential errors from respondents and coders but must also be capable of eliciting answers as close as possible to the truth²⁴.

7.6.1 Constructing Questionnaires

The art of questionnaire design requires a pro-active mind to think ahead of the research problem, understand precisely the concepts that need to be measured and the manner the data are to be processed and analysed later. It is a waste of effort to collect information which is either irrelevant or cannot be analysed. Thus it is important to begin with the purpose of the whole research and the questions that arise; these are then used to check and recheck continuously the relationship between the questionnaire items and the research questions. For example in explanatory research, it is useful to think of four aspects of the questionnaire, namely : *measures of the dependent variables, independent variables, test variables and background measures*. Since this research is both descriptive and explanatory in nature, apart from the above, the questions will concentrate more on the phenomenon we are attempting to explain.

²⁴ A more detailed discussion on this topic may be found in De Vaus (1993), Fowler (1988), De Maio (1983), Oppenheim (1968) and, Sudman and Bradburn (1982).

7.6.2 Framing Questions

In framing questions, Dillman (1978) suggested that it is helpful to distinguish between four distinct types of question content, namely, *behaviour*, *beliefs*, *attitudes* and *attributes*. For example, if we were interested in analysing the *behaviour* of the subjects, then we would formulate questions to establish what people *do*. On the other hand, if we were interested in *beliefs*, that is, in what people believe is true or false, then we need to ask a different type of questions. This is because the focus of belief questions is on establishing what people think is true rather than on the accuracy of their beliefs. Thirdly, while belief questions ascertain what the respondent thinks is true, *attitude* questions try to establish what they think is *desirable*. Finally, *attribute* questions are designed to obtain background information about the respondent's characteristics, such as their age, gender, occupation, education, marital status, income, etc.

In a closed-ended questionnaire, there are several formats of responses that can be used such as the Likert-style rating scale, semantic differentials, checklists, ranking and the multiple-choice type questions. After conducting a pilot test on the initial draft of the questions, we decided to adopt the multiple-choice type. Although this format requires a lot of time in ensuring an unbiased and exhaustive range of possible responses, it offers greater accuracy, reliability and simplicity in coding of respondents' answers for data processing later. However, since the questionnaire was designed to be self-administered, it was also essential for us to ensure that the instructions were very clear, precise and simple to follow. Each question was phrased as self-explanatory, avoiding any possible ambiguity and there were distinct differences between each choice of responses. All these were only made possible through the process of pretesting.

7.6.3 Pilot Testing

Before the final questionnaire was produced, a pilot test was conducted based on an initial draft. The test was carried out by mailing the questionnaire-draft to about 250 addresses in Kuala Lumpur. As expected, the response was not encouraging with only 112 (44.8%) responding. However, this was good enough to gauge the reliability and quality of the questionnaires. Among others, the test was aimed at identifying the following and subsequently, all necessary changes were made accordingly.

1. To ensure that there were no leading questions, no complex and long winded statements, no double negative or double-barrelled sentences and no ambiguity in either the questions or the responses. In short, the question must be simple, precise and understood in the manner it is meant to be.

2. To test the sensitivities of the respondents on some personal questions such as income, savings, investments, current wealth, level of religiosity, etc. It was apparent that the levels of measurement to these questions needed to be changed from interval to nominal and ordinal.

3. To check for the reliability, validity and redundancy of the questions posed. The length of the questionnaire was also adjusted when it was found that some respondents have simply skipped the last few sections, due possibly to boredom.

4. Finally, to check on the overall layout and ordering of the questions. To this, De Vaus (1993) suggested commencing with questions the respondent will find enjoyable to answer. Questions should be ordered from easy to more difficult, from concrete to abstract, moving from section to section in an organised and systematic manner. Oppenheim (1968) also emphasised that personal or demographic questions

such as age, income, marital status, etc. should never be asked at the beginning but instead should be placed at the end.

7.6.4 The Questionnaire

The questionnaire prepared for the field-work appears in Appendix C. As can be seen, it was prepared in two languages as an alternative for the respondents to choose, one in English and the other in *Bahasa Malaysia* (the formal national language). The translation was carried out meticulously and tested during the pilot-stage to ensure exactness in meaning between them. In any case, most of the respondents used the English version rather than the latter. This was not surprising, considering the sample selected was of educated Bumiputera Muslim executives, most of whom were University graduates, who were city-dwellers with economic status falling within the middle and upper income brackets. English is the country's second language and the lingua franca for the private and business sectors.

The questionnaire was made up of 71 questions and has been divided into seven main sections. In general, most of the questions were of the (force) multiple-choice type, deliberately designed for ease of coding, processing, evaluation and further analysis. The following are brief descriptions of each of the sections, their objectives and the conceptual indicators they represent :

Part One - General Background. This part comprised eight questions. They were made up mainly of behaviour and general attribute enquiries. The questions were constructed in a very simple and straight forward manner with the objective of portraying the simplicity in answering the questions and thus encouraging the respondents to complete the questionnaire. The norm in questionnaire design is always to commence with questions that keep the respondents at ease, building up from simple

to more thought-provoking opinions and placing the more personal questions only at the end of the questionnaire.

Thus most of the questions posed were not as highly relevant as those in the other sections. For example, the first three questions inquired the respondents' attributes of having either rural or urban background; however, as indicated earlier, the target sample group of urban-dwellers has already been decided prior to the field survey. Hence the choice of "urban" as answers to these questions were already expected. The next five questions attempted to establish the "quality" of the respondents by looking at their general exposure, their news interest in keeping abreast with daily happenings, their reading materials and the languages they were conversant in. In most circumstances, it has been noted that, those who were very conversant in English (especially with foreign education exposure), generally tended to be more critical and radical in their responses to questions on socio-economic and political outlook.

Part Two - Your Opinion of Policies for Muslims in Malaysia. This part was made up of six questions and it was apparent from the heading that the nature of the questions sought to understand their beliefs. These were questions attempting to establish the respondent's opinions on some of the country's economic policies and plans that have been introduced specifically to rectify the problem of inequitable distribution of share capital ownership faced by the Bumiputera Muslims.

The objective of this section was to assess the respondent's level of awareness, appreciation and understanding of the socio-economic problems confronting the Bumiputera Muslims in the country. The responses to these questions were then verified against the responses in the subsequent part three to ensure consistency of opinions. For example, it would be inconsistent for one to claim complete ignorance of a certain Government's economic policy in part two and yet state in part three that the policy needs changing or has not brought about much benefits. Such occurrences were taken

note of when the data were being analysed. Besides, the questions in this section were also used to evaluate the relationships between the respondent's awareness of the economic imbalance against his behaviour towards savings, consumption and investment in the capital market. The idea was to analyse the respondent's contributions toward overcoming the problem.

Part Three - Your Opinion of the Government's Economic Policies. There were seven questions in this part querying both the attitudes and beliefs of the respondents. The first three attitude questions attempted to gauge their feelings about, and satisfaction with the current policies governing their economic involvement in the market. The remaining four questions attempted to establish their agreements or otherwise on certain issues. For example, one of the questions inquired whether they agree to a policy of forced-investments among the Bumiputera Muslims in order to increase the community's investment participation in the market. It is important to note that the objective in constructing *belief-questions* is to establish what people think is true or false, rather than on the accuracy of their beliefs.

Part Four - Your Opinion of Investments and the Stock Market in Malaysia. All the ten questions that appeared in this part were again seeking to understand the respondent's beliefs and understanding in several fundamental issues such as the Islamic *Shari'ah* rulings on investing in the capital market. The responses from this section will enable us to analyse their opinions of the suggestion that the offerings of Islamic investment instruments, and establishment of an Islamic-based stock market would encourage and influence the level of Bumiputera Muslims participation in equity investment. Some of the questions were also constructed as indicators of attitudes toward risk.

Part Five - Your Savings Background. Ten questions have been constructed to gauge the respondent's savings background and their behaviour towards savings. We

defined saving as the difference between the respondent's income and his consumption. It is money that he/she²⁵ sets aside at his own disposal for some future use, in a bank or any institution that generally bears negligible risk of it being lost or depleted. Some personal questions such as the amount of savings currently held were carefully constructed with responses falling into broad bands rather than specific amounts for reason of maintaining privacy.

Apart from wanting to study the pattern of their savings, it was also of interest to analyse the relationships between their income levels and consumption patterns, relative to their marital status and amount of investment held. The results would provide complementary information to the questions posed in the following section.

Part Six - Your Investments Background. Of all the seven parts that made up the questionnaire set, this was the largest and perhaps the most important part as it formed the background for the whole study. Investment has been broadly defined as the commitment of money to buy an asset for a period of time in order to derive an expected future returns. Eighteen questions were designed to draw all relevant information with regard to the respondent's attitude and behaviour toward investment either in the capital market, real estate or other alternatives.

Some of the questions posed were employed as indicators to verify the validity of the claims that : firstly, the Bumiputera Muslims seemed to have higher preference to invest in houses and land rather than in the riskier investment of stocks and shares; and secondly, the community's lack of involvement in the capital market was also due to their lack of knowledge and appreciation of the stock market as a rewarding investment alternative, and a source of long-term growth and wealth distribution for their future economic well-being.

²⁵ The pronoun 'he' will, here after, denote both masculine and feminine genders, he and she.

Part Seven - About Yourself. As discussed earlier, personal or demographic questions have always been placed at the end of a questionnaire in order to avoid any discouragement for the respondent to complete it. The twelve questions that appeared in this part sought to assess the attributes of the respondents. The responses from the sample will form the basis for our inferences about the population parameters.

7.6.5 Levels of Measurement

Before analysing the data it is relevant to appreciate the nature of variables that have been designed in the questionnaire. This is because certain statistical tools would require the variables to be at certain levels of measurement before the tools could be employed. The level of measurement of a variable refers to how the categories of the variable relate to one another. There are basically three main levels of measurement, the *nominal*, *ordinal* and *interval* (or *ratio*) in the respective ascending order of increasing precision²⁶. A *nominal variable* (sometimes called categorical) is one where we can distinguish between categories of a variable but cannot rank the categories in any order. The assignment of nominal scales to different categories or groups of a variable is done for identification or classification purposes only, and is purely an arbitrary process. For example it is meaningless to rank sex, marital status, nationalities, religions, etc.

In contrast to the categorical scale which is based upon descriptive qualities, an ordinal scale is concerned with some quantitative qualities that can be used to classify further. Hence an *ordinal variable* is one where it is meaningful to rank the categories but it is not possible to quantify precisely how much difference there is between the categories. For example in asking the respondent to state how strongly they agree or

²⁶ Some authors considered them as having four levels, separating interval and ratio as two separate scales. The argument lies in the positioning of the zero point. In an interval scale, the zero point is arbitrary and defined as a matter of convenience. However, in a ratio scale a true zero point has been defined. The implication of this definition is that the measurements of the random variable can be compared in the form of ratios. For further discussion, see Kazmier and Pohl (1987 : Chapter 18).

disagree with a statement, we may rank the responses in terms of the strength of their agreement. However, we may not be able to quantify the difference between, for example, "strongly agree" and "strongly disagree".

Finally, an *interval* (or *ratio*) variable is one in which the categories have a natural ranking and it is possible to quantify precisely the differences between each of the categories. For example, if income is measured in specific numerical terms, the precise difference between the categories can then be quantified. However, if it is only measured as high, middle and low levels then it would become an ordinal variable.

In general, it is always advisable to measure variables at the highest level appropriate to that variable, but considerations of reliability, response rate and need will mean that measurement at lower levels often makes most sense. In the case of the questionnaire, the level of measurement designed was either nominal or ordinal. This was due to two main reasons : firstly, the nature of some of the questions did not allow for an interval or ratio level to be used; and secondly, the experience of the pilot-test conducted earlier, indicated that the rate of responses would be very low if the inquiry became too specific or detail. This was especially true for many personal and demographic questions such as age, marital status, income, savings, etc. The situation did not improve even after assurances were given that the responses would be kept in strict confidence and the respondents were to remain anonymous. Thus we had to compromise between the need to capture as much relevant data as possible, and the level of precision acceptable in the answers to the questions²⁷. For example, some of the more powerful and sophisticated techniques, such as the multivariate regression analysis, are only appropriate for the interval level variables. Nevertheless, as we shall see later, with the development of some new statistical theories and computer packages

²⁷ As we shall see later, this will normally be at the expense of the possibility of employing several stringent parametric testing.

over the years, such as the SPSS V, there are several means to overcome these problems with equally high accuracy.

7.7 Data Preparation and Statistical Analysis

The final stage in a research process after data have been collected is data processing and statistical analysis. Its findings will enable us to draw inferences about the population parameters as well as determining the validity (or otherwise) of the hypotheses set forth earlier. Before any processing or analysis can be carried out, it is important for the data to be verified and validated. This section will discuss the data preparation stage and highlight the various methods of statistical analysis employed. The computer software used is the Statistical Package for the Social Sciences (SPSS V) Release 5.0.

7.7.1 Data Preparation

Although many researchers regard this task as trivial and omit its discussion, it is important to note that an erroneous data file would lead to erroneous analysis/findings. The followings describe the sequence of procedures carried out in this research :-

1. Initially, each of the questionnaires was gleaned to check for consistency and reasonableness. Essentially, in observing the pattern of responses in a questionnaire, it may be obvious that a particular answer was unintended and should be deleted or edited. In other cases, the inconsistency or unreasonableness was established with care, so that unanticipated and valuable information was not simply discarded.

2. Secondly, codes were then allocated to the answers to each question or variable and a code book that outlines the variable names and the corresponding codes was prepared.

3. Next, we have to decide the manner in which missing values are to be handled. There are two forms of missing values, user-missing values and system-missing values and each need to be treated accordingly²⁸.

4. Some of the questions appeared in a multivariable form, whereby the respondent was allowed to choose more than one response to a question. In this case, there was a choice of either turning each response into a separate variable, or "recoding" the answers into various possible combinations of responses. Although the recoding was very laborious, it was chosen for ease of comparison and analysis later.

5. When data were keyed into the computer using an editor, there was still a possibility of making transcription errors. Hence, the data were entered twice into two separate files, and the files were then compared for further verification. Finally, several trial runs were conducted to ensure a clean and error-free data file before running it with the SPSS programs.

7.7.2 Statistical Analysis

Detailed analysis of the survey data captured will be discussed in the following three chapters. In this section, we shall provide an overview as well as the various methods of statistical analysis employed. To recapitulate, the sample size of the survey was 575 respondents. From the 71 questions posed in the questionnaire, a total of 93 variables (made up of 38 ordinal and 55 nominal variables) were constructed for the

²⁸ For further details, please refer Norusis (1990 : p.57).

statistical analysis. However, after some recoding was done on the multivariable questions, the final set of variables remained at 73, including one case variable, 38 ordinal and 34 nominal variables.

7.7.2.1 Overview of Analysis

Before analysing data it is important to be very clear about the question we are attempting to answer. In this regard, our question was pertaining to the model we hypothesised. We attempt to analyse : firstly, the underlying reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market; and secondly, to explore the means and possibility of redressing the balance of equity distribution (or share capital ownership) among the various communities in the Malaysian corporate sector.

Based on these objectives, we approach the study firstly, by offering an abstract hypothetical theory to explain the issue. Using this as the theoretical domain, we then develop a testable hypothesis that will enable us to construct a model. Next we derive the concepts and then develop the empirical indicators to measure these concepts. The collection of primary data based on the empirical indicators enable us to conduct statistical tests on the hypothesis. This will apparently address the questions and determine the extent and validity of the hypotheses put forth in section 7.3.2 earlier.

De Vaus (1993) asserted that there are three factors which affect how the data are being analysed : (1) the number of variables being examined; (2) the level of measurement of the variables; (3) whether we want to use our data for descriptive or inferential purposes.

In practice, however, we develop and refine our research questions in the process of analysis so as to move between univariate, bivariate and multivariate techniques. It is

obvious that the method of analysis adopted depends on the complexity of the research question. For example, frequency distribution is best for the univariate method, while for the bivariate methods we have the choice of crosstabulations, scattergrams, regression, rank order correlation and the comparison of means. The multivariate methods include the conditional tables, path analysis, partial rank order correlation, multiple and partial correlation and regression, etc. Advance statistical analyses available on the SPSS V include the discriminant analysis, cluster analysis, factor analysis, bi/multinomial analysis, logit/probit modellings and several others. Nevertheless the choice and ability to employ these, in part, is very much dependent on the level of measurements of the variables involved and the nature of the questions.

Basically there are two types of statistics : descriptive and inferential. Descriptive statistics are those which summarise patterns in the responses of people in a sample. In general, the methods of descriptive statistics include graphic techniques and numeric measures. Some examples of the graphic techniques are the histogram, bar charts, pie charts, and line graphs, while the principal numeric measures used to describe data sets are measures of central tendency (mean, median, mode) and measures of dispersion (range, variance, standard deviation, etc.). On the other hand, the function of inferential statistics is to provide an idea about whether the patterns described in the sample are likely to apply in the population from which the sample is drawn, that is, it enables us to infer from the sample to the population.

7.7.2.2 Methods of Analysis

The followings are the various methods of analysis employed in the study :-

1. Univariate Analysis Since our variables were either nominal or ordinal, there were not many choices that could be made for describing the data apart from the frequency distribution. As for the measures of central tendency, it was meaningless for one to

compute the mean or variance or standard deviation from such variables. The choice for the nominal variable was the mode while the choice for the ordinal variable was the median. The inability to compute any significant measures of dispersion in the first place, posed a tremendous constraint on the application of any regression-based analysis on the data.

2. Bivariate Analysis One of the most common and powerful methods of bivariate analysis is crosstabulation which is a way of displaying data so that we can fairly and readily detect association between two variables. This is in fact the heart of bivariate analysis, that is, to see whether two variables are related (associated) in some ways. The various methods of analysis and statistics simply differ in the way they assess this particular factor of association. Two variables are said to be associated or related when the distribution of values on one variable differs for different values of the other. There are a large number of statistics available which provide concise summaries of the association in a crosstabs and all these are called *correlation coefficients* or *measures of association*.

Once we have identified the variables from which we wish to draw information, it is important to identify which one is to be used as the *dependent variable* and which as the *independent variable*. This is because not all coefficients would give symmetric measures. After the measure is done it is then important to gauge the two variables strength, direction and nature of association (if any).

3. Crosstabulation Statistics When dealing with nominal variables it does not make sense to calculate its mean and therefore performing the *t-test* is not possible. A statistic often used to test the hypothesis that the row and column variables are independent is the *Pearson's chi-square*. The chi-square test is a test of independence and statistical significance, however, it provides little information about the strength or form of the association between the two variables.

There are also some other problems with chi-square tests. For example, certain conditions must be met for the chi-square distribution to be a good approximation of the distribution of the statistics. The data must be random samples from multinomial distributions and the expected values must not be too small. While it has been recommended that all expected frequencies be at least 5, recent studies indicate that this is probably too stringent and can be relaxed²⁹. Another problem with chi-square is the fact that sometimes the figure does not fall between 0 and 1. The size of the result is affected by sample size and table size (or degrees of freedom). Whenever the sample is too small, we will not be able to detect even large differences. On the other hand, if the sample size is very large (as we presume our sample is), even small differences can be statistically significant; hence our choice of the 0.01 or 1% level of significance. Thus it is difficult to make much sense of the chi-square result on its own.

To deal with this problem a number of statistics have been developed which convert the raw chi-square figure into a correlation coefficient between 0 and 1. There are two broad types of coefficients that can be used : the *chi-square-based* and the *proportional reduction of error* (PRE) measures. Of the former, the two most useful coefficients are the phi and Cramer's V and these two are extensively used in our analysis. Of the PRE measures, the main PRE type coefficients used when dealing with nominal variables are Yule's Q, lambda, and Goodman-and-Kruskal's tau. These are used to complement our previous analysis. When the variable is ordinal, the most common PRE statistic is Gamma and alternatives are Kendall's tau-b and tau-c. However, we noted that these three statistics only measure linear association. Whenever we suspect the relationship is to be non-linear, we employ the nominal measure of association³⁰.

²⁹ See for example, Everitt (1977) and Marsh (1988).

³⁰ See De Vaus (1993).

4. Multivariate Analysis This type of analysis requires our data to be at the interval level of measurement. Since this was not the case for our variables, further discussion of this approach is irrelevant. Nevertheless, it is interesting to see the possibility of conducting factor analysis and the hierarchical loglinear analysis which will be discussed later.

5. Parametric versus Nonparametric statistics As Bryman and Cramer (1990) aptly claimed, one of the unresolved issues in data analysis is the question of when parametric rather than non-parametric tests should be used. Some writers have argued that it is only appropriate to use parametric tests when the data fulfil the following three conditions : (i) the level or scale of measurement is at the interval or ratio scale; (ii) the form of the population distribution is normal; and (iii) the variances of both variables are equal or homogeneous³¹. Parametric tests are based on the assumption that we know certain characteristics of the population distribution from which the sample is drawn, such as the mean or variance.

However, there are many situations in which the assumption of normality does not appear reasonable. In our case, data were either nominal or ordinal; and we did not have much information about the population distributions. In these situations, procedures that require very limited assumptions about the distributions of the data can be used, that is, the distribution-free or non-parametric statistical tests.

Although this is the advantage of the non-parametric tests, they are not without their disadvantages. For instance, they are usually not as good at finding differences between groups or variables when the differences do in fact exist. In other words, non-parametric tests are not as powerful as their parametric counterparts, and this is especially true since they usually ignore some of the available information. For example,

³¹ However, others (for example, Lord : 1953) have challenged the argument claiming that the restriction to have these three conditions met before parametric tests can be applied is unnecessary. The detailed argument is beyond the scope of our discussion.

they replace actual data values with ranks. Thus in general, if the assumptions of a parametric procedure can be met, we should prefer it to the latter. Nevertheless, according to Siegel (1956), the non-parametric test such as *Mann-Whitney test* is about 95% as powerful as the parametric t-test. The former (also known as the Wilcoxon test) is among the most common non-parametric procedures used to test the hypothesis that two independent samples come from populations having the same distribution. When the number of samples are more than two, we employed the *Kruskal-Wallis test*, the equivalent of one-way analysis of variance.

Finally, in order to identify the underlying constructs or factors that explain some complex phenomena and the correlations among a set of variables, factor analysis was used. Apart from this, the hierarchical loglinear models were also constructed to identify the relationships among the categorical variables. Both of these advanced techniques will be dealt with in chapter ten.

7.8 Summary

The objective of this chapter was to describe the research methodology employed in conducting the research, elaborating on the process involved in designing the field survey. It also emphasised the importance of observing a scientific method of enquiry in the research process so as to ensure the validity (at an acceptable degree of confidence) of the conclusion drawn from the survey analysis.

As explained earlier, the main thrust of the study rested upon two things : firstly, to analyse the underlying reasons for having an insignificant number of Bumiputera Muslims (relative to the other communities) investing in the Malaysian capital market; and secondly, to explore the means and possibility of redressing the balance of equity

distribution (or share capital ownership) among the various communities in the Malaysian corporate sector.

The research undertaken employed both the processes of *induction* and *deduction* at different stages of the study. Often it is very difficult to describe or identify whether one is *theory testing* or *theory constructing* because the logic of the research process involves the shuttling, back and forth between theory and observations. Thus, rather than moving through a fixed set of steps, we moved through them in a fashion that continuously reinforced our previous findings until reaching the optimal limits of the statistical analysis.

The method used in data collection was the *survey research design*, employing the *self-administered close-ended questionnaire* as the research instrument. We also used the combination of the *stratified random technique* and the *multi-stage (area) cluster sampling* in determining our sampling frame. The optimal sample size was deduced to be 600 respondents from the middle and upper income brackets of the Bumiputera Muslims community, living in the large towns and cities of West Malaysia. The actual survey was conducted between June and August 1993. Earlier, a pilot-test was carried out to refine the approach in designing the questionnaire. Of the 700 sets of questionnaire handed out, 575 were collected back in good order, to be included in our final analysis. This constituted about 82% response rate with a sampling error of about 4.17% at the 95% confidence interval.

Due to the nature of the questions posed, the levels of measurement could only include the nominal and ordinal types of variables. This in a way has hindered the possibility of employing some of the more powerful and sophisticated statistical techniques, such as the multivariate regression analysis, which require the variables to be at the interval level. Nevertheless, as we shall see later, with the development of some new statistical theories and computer packages over the years, such as the SPSS

V, there are several means to overcome these problems with equally high accuracy. Among others, this includes the use of factor analysis and hierarchical loglinear analysis. In the following three chapters, we shall elaborate on the survey findings and the statistical analyses (including univariate, bivariate and multivariate) involving both the parametric and non-parametric statistics.

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CHAPTER 8

PERCEPTIONS AND BEHAVIOURAL PATTERNS OF BUMIPUTERA MUSLIM INVESTORS IN MALAYSIA : A DESCRIPTIVE ANALYSIS

8.1 Introduction

The whole statistical analysis in the study has been divided into three chapters. While this chapter describes the univariate analysis of the sample, the next chapter will explain the results of the bivariate analysis of the data set. The emphasis on descriptive univariate analysis involves the reporting of results of the survey by examining data and describing how respondents vary in their responses to each question. On the other hand, the bivariate analysis will explore the differences and relationships among the variables, as well as testing the strength and significance of their associations within the model described earlier. Finally, in the last chapter of the analysis, chapter 10, we shall progress to more difficult tasks by conducting exploratory factor analysis and hierarchical loglinear analysis.

The objective of this chapter is to provide a detail description of the sample under study so as to enable the reader to appreciate the nature and characteristics of the respondents involved. From the sample, we shall later on draw inferences on the population parameters. The main focus of the analysis, however, will be on the perceptions and behavioural patterns of the Bumiputera Muslim savers and investors in the Malaysian capital market. Although descriptive statistics serve only as a first step, they are fundamental for the development of further inferential analysis.

At the outset, it is good to recapitulate that the sample size of the survey was 575 respondents, largely from the middle income bracket, stratified and randomly selected from all the nine large cities/towns of West Malaysia, including the capital city of Kuala Lumpur. The breakdown of the respondents was as follows : the total number of respondents from Kuala Lumpur was 383 (67%), while the total number of respondents from the other cities/towns was 192 (33%)¹. The questionnaire set comprised 71 questions from which a total of 73 variables were constructed, made up of the case variable, 38 ordinal and 34 nominal variables. Since none of the variables were at the interval level of measurement, all the statistical exercises carried out were under such constraints. The following table summarises the choice of statistics suggested for different levels of measurement :

Table 8.1
Selecting Statistics for Univariate Analysis

Descriptive statistics			Inferential statistics
Level of Measurement	Central Tendency	Dispersion	
Nominal	Mode	Variation ratio	Interval estimate using standard error of the binomial
Ordinal	Median	Decile range	As above
Interval	Mean	Std/deviation or variance	Interval estimate using standard error of the mean

Source : De Vaus (1993).

Notice that for a nominal variable, the only way to measure central tendency is the mode. While the mode can also be used for ordinal data, the median is preferred because it takes into account the fact that people can be ranked on ordinal variables. However it would be meaningless to compute the mean, variance or standard deviation for these variables because such computation would require actual data to be measured at the interval level. At this stage, we shall summarise our sample by displaying the frequency distribution of each variable and denote its measure of central tendency. (The

¹ The reasons for such a skewed distribution in the sampling frame have already been discussed in the previous chapter. It was also for this reason that we conducted a "comparative analysis" between the two sample subsets in the next chapter.

inferential statistics will be carried out later.) These distributions will provide information about the relative frequency of the occurrences of a variable which would indicate the relative preponderance of each category in the sample.

8.2 Data Summary

In presenting the following tables, extracted from several SPSS outputs, notice that some of the value labels have been deliberately abbreviated for convenience of presentation. Besides, in certain tables, the percentage column may not add-up to 100% due to the omission of missing values in order to avoid cluttering the tables further. For questions which offer multiple responses from the respondent, we have included both the percentages of responses and cases. It is obvious then, that the latter would exceed 100% since the respondents would have chosen more than one response to those questions.

8.2.1 Part One - General Background

Objective : There were 8 questions in this part and the objective of the section was basically to discover more about the respondents' environment. This part was not meant to provide any significant input to the actual search of the study, but was deliberately meant to be simple in order to win the respondent's co-operation in answering those more demanding questions in the parts that follow. Nevertheless, it did provide some interesting information on the characteristics and nature of the sample.

Q1. Do you live in an urban or rural area ?

Value Label	Value	Frequency	Percent	Cum. Percent
Urban	(Mode)1	508	88.3	88.3
Rural	2	67	11.7	100.0

Note : ¹Cum. Percent is an abbreviation for cumulative percentage.

Q2. Is your work place in an urban or rural area ?

Value Label	Value	Frequency	Percent	Cum. Percen
Urban	(Mode)1	513	89.2	89.2
Rural	2	41	7.1	96.3
Both the above	3	21	3.7	100.0

Q3. Do you regard yourself as having an urban or rural upbringing ?

Value Label	Value	Frequency	Percent	Cum. Percen
Urban	(Mode)1	215	37.4	37.4
Rural	2	201	35.0	72.3
Both the above	3	159	27.7	100.0

Q4. Which of the following language/s do you use most often in your daily work ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Bahasa Malaysia	(Mode)1	519	52.6	90.3
English	2	463	46.9	80.5
Chinese	3	1	0.1	0.2
Others	5	4	0.4	0.7
Total multiple responses :		987	100.0	171.7

Q5. Which of the following daily newspapers do you read (language) ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Bahasa Malaysia	(Mode)1	491	50.0	85.7
English	2	489	49.8	85.3
Others	5	2	0.2	0.3
Total multiple responses :		982	100.0	171.4

Q6. Do you normally listen to the daily news on television or radio ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	505	87.8	87.8
No	2	3	0.5	88.3
Sometimes	3	67	11.7	100.0

Q7. Which of the following news in the media interest you most ?

Value Label	Value	Frequency	Percent	Cum. Percen
Other news	1	222	38.6	38.7
Business news	(Mode)5	269	46.8	85.7
All news	8	82	14.3	100.0

Q8. Can you name a few magazines that you read regularly ?

Value Label	Value	Frequency	Percent	Cum. Percen
Business mags. ¹	(Mode)1	356	61.9	82.0
Other mags.	2	78	13.6	100.0

Note : ¹Mags. is an abbreviation for magazines.

Comments : As indicated earlier, out of the 575 respondents, 192 (33%) of them were drawn from the various towns and cities of West Malaysia, while the remaining 383 (67%) came from the capital city Kuala Lumpur. Hence it was not surprising to find a large percentage of responses indicating their urban dwellings and livelihood. Crosstabulating between the "place of upbringing" and the "workplace" showed that about 60% of the cities workforce came from those having rural upbringing. This is a natural phenomena of labour migration in developing countries, moving from rural to urban areas in search of better economic opportunities. It is still very common, especially among the Bumiputera Malays whose population are mainly found in the rural districts of the country, and who often migrate to the cities for better pastures. On the other hand, most of the big towns and cities have always been inhabited by the Chinese who are largely businessmen or traders. Such a demographic structure has always been the case since the colonial era.

While it was not surprising to see the use of English and Bahasa Malaysia (the national language) as the main languages of communication at the workplace, it was indeed interesting to note that only about 62% of the respondents (supposedly from the middle and upper income brackets) were interested in listening to or reading business-related reports and news. On the question inquiring about the magazines they regularly read, about 25% did not answer at all. Since a person's understanding of the business and economic developments of the country was considered relevant in shaping his views on some related questions that follow, these facts were expected to influence the kind of responses to be seen in later sections.

8.2.2 Part Seven - About Yourself

This part, rather than part two, is introduced at this stage so as to provide continuation in describing the nature and characteristic of the sample gathered from the survey.

Objective : The objective of this section was self-explanatory, that is, to understand and appreciate the type of respondents that have been included in the sample. The information gathered were considered very significant for use in further statistical inferences at later stages.

Q60. Religion ?

Value Label	Value	Frequency	Percent	Cum. Percen
Islam	(Mode)1	572	99.5	99.8
Others	2	1	0.2	100.0

Q61. Race ?

Value Label	Value	Frequency	Percent	Cum. Percen
Bumiputera	(Mode)1	566	98.4	98.6
Non-Bumiputera	2	8	1.4	100.0

Q62. Sex ?

Value Label	Value	Frequency	Percent	Cum. Percen
Male	(Mode)1	429	74.6	74.9
Female	2	144	25.0	100.0

Q63. Age ?

Value Label	Value	Frequency	Percent	Cum. Percen
21 - 30	1	97	16.9	16.9
30 - 40	(Med) ¹ 2	276	48.0	65.0
40 - 50	3	177	30.8	95.8
50 - 55	4	21	3.7	99.5
Above 55	5	3	0.5	100.0

Note : ¹Med is an abbreviation for Median.

Q64. Marital Status ?

Value Label	Value	Frequency	Percent	Cum. Percen
Single	1	71	12.3	12.4
Married	(Mode)2	492	85.6	98.1
Divorced	3	8	1.4	99.5
Widowed	4	3	0.5	100.0

Q65. Number of dependants ?

Value Label	Value	Frequency	Percent	Cum. Percen
Less than 5	(Med) 1	400	69.6	73.4
5 - 8 persons	2	138	24.0	98.7
More than 8	3	7	1.2	100.0

Q66. Educational background ?

Value Label ¹	Value	Frequency	Percent	Cum. Percen
Primary	1	1	0.2	0.2
Sec.school	3	58	10.1	10.3
Dip./Cert.	4	104	18.1	28.4
Univ.grads.	(Mode)5	335	58.3	86.8
Professionals	6	76	13.2	100.0

Notes : ¹Sec. - Secondary; Dip./Cert. - Diploma/Certificate; Univ. grads. -University graduates.

Q67.1 Occupation ?

Value Label	Value	Frequency	Percent	Cum. Percen
Professionals	1	72	12.5	12.6
Self/Business	2	182	31.7	44.3
Others/Admins.	(Mode)3	319	55.5	100.0

Q67.2 Which sector?

Value Label	Value	Frequency	Percent	Cum. Percen
Private sector	(Mode)1	224	39.0	39.1
Public sector	2	179	31.1	70.3
Semi-govt.	3	170	29.6	100.0

Q68. Number of years working ?

Value Label	Value	Frequency	Percent	Cum. Percen
Less than 5 yrs.	1	98	17.0	17.2
5 - 10 yrs.	2	121	21.0	38.4
More than 10 yrs.	(Med) 3	187	32.5	71.1
More than 15 yrs.	4	165	28.7	100.0

Q69. What is your average monthly income ?

Value Label (in RM '000)	Value	Frequency	Percent	Cum. Percen
Less than \$1	1	27	4.7	4.7
\$ 1- 3	(Med) 2	271	47.1	51.9
\$ 3 - 6	3	201	35.0	86.9
\$ 6 - 9	4	40	7.0	93.9
\$ 9 - 12	5	13	2.3	96.2
\$12 - 15	6	10	1.7	97.9
More than \$15	7	12	2.1	100.0

Q70. Is your spouse working ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	378	65.7	74.4
No	2	130	22.6	100.0

Q71. If your spouse is working, what is his/her average monthly income ?

Value Label (in RM '000)	Value	Frequency	Percent	Cum. Percen
Less than \$1	1	58	10.1	15.4
\$ 1 - 3	(Med) 2	210	36.5	71.1
\$ 3 - 6	3	76	13.2	91.2
\$ 6 - 9	4	18	3.1	96.0
\$ 9 - 12	5	7	1.2	97.9
\$12 - 15	6	2	0.3	98.4
More than \$15	7	6	1.0	100.0

Comments: Although the religious stratum employed in selecting the sample in the first place has already been identified to be Bumiputera Muslims, the question was still asked to ensure the validity of the data. It was thus expected to show 100% Bumiputera Muslim respondents since the study was targeted at this group. Nevertheless, one respondent was found to be a non-Muslim Bumiputera but was still included in the data set because we believed it was caused by a transcription error.

Further, we noticed from the response given to the question on race, there were eight non-Bumiputera Muslim respondents. As explained previously, not all of the Muslims in Malaysia were necessarily Bumiputeras (indigenous or son-of-the-soil); and likewise, not all Bumiputeras were necessarily Muslims. Although the target group was earlier defined to be the Bumiputera Muslims of West Malaysia, we have here again

decided to include these eight respondents in our data set for two reasons : firstly, by virtue of them being Muslims (which was an important criteria in our analysis); and secondly, for not wanting to lose too many respondents due probably to technical and transcription errors² . Besides, they made up only 1.4% of the total respondents size and would not have adversely affected our final analysis.

The random selection has provided us with a typical demographic frame of the urban workforce in Malaysia with the gender ratio of about 3:1 between male and female respectively³ . As many as 48% of them fell within the age band of 30 - 40 years old, while another 31% were between the age group of 40 - 50 years old. As expected, a substantial proportion (86%) of these age groups were already married and have at least 3 - 4 persons as dependants. It was also very common to find young families of the Malay community, supporting their parents in the villages rather than having them in the old peoples' homes. This probably explained why we had 73% with less than 5 dependants while about 25% had between 5 to 8 persons to support.

As far as education level was concerned, we found that more than 70% of them had either professional qualifications (accountants, doctors, lawyers, etc.) or University degrees, while about 18% possessed college diploma qualifications. When comparing the various occupations of the respondents to the sectors they were in (taking into account the number of years they had been in service), all the responses seemed to correlate very closely within the "reasonable" range of income brackets. A cross-check against the age and education levels of the respondents also confirmed the validity of the income groupings. The same verification was done for the spouse's education and income level.

² It was very likely that the problem was due to transcription errors because the distribution of the questionnaires was done personally after ensuring that each respondent fell into the target group.

³ This estimated ratio was based on the related income levels which fell within the bands of managerial and executive urban workforce. See The Sixth Malaysia Plan (1991-1995).

Another interesting point to note from the sample was the distribution of occupational sectors the respondents represented. We obtained an almost evenly spread sample with 39% from the private sector, 31% from the public sector and the remaining 30% from the various public enterprises. About 44% of them were either professionals, self-employed or working in a business environment.

To sum up the above section, the nature and characteristics of the sample set was as follows : a large percentage of the Bumiputera Muslim respondents were of the younger age group, well educated and trained, spread between the private and public sectors, married and settled with a small family, and (based on their age groupings) were presumably on the verge of establishing themselves further in their career path. They fell between the bands of junior managers and senior executives or administrators in their respective sectors. This probably presents an ideal group to be included because they could be considered as the current "second-liners" that would take over the future top-level executives.

The inferences drawn from the sample were expected to closely resemble the population parameters (with a reasonable degree of confidence), and to encompass the actual values of the parameters being estimated. Hence, apart from the likelihood of some sampling errors, we could safely claim that it would be very likely for the responses to be good representation of the attitudes and perceptions of the Bumiputera Muslims toward the issues of savings and investment behaviour in the Malaysian capital market.

8.2.3 Part Two - Your Opinion of Policies for Muslims in Malaysia

Objective : There were only six questions posed in this section. The objective was to gauge both the respondents' opinions, as well as their level of understanding and

appreciation of the Government's policies for enhancing the economic status of the Bumiputera Muslims. The underlying aim was to evaluate their awareness and consciousness of several basic economic policies and issues affecting them. Later, we will relate their responses to this section with part three, which inquired about their opinions of some of the Government's economic policies. In order to obtain a better picture of the kind of Bumiputera community the sample represented, we then cross-checked these responses against their occupations, income-levels, academic qualifications and age-groups.

Q9. In general how satisfied are you with the overall economic achievements of the Muslims in our country today ?

Value Label	Value	Frequency	Percent	Cum. Percen
Totally satisfied	1	1	0.2	0.2
Satisfied	2	113	19.7	20.0
Neither	(Med) 3	179	31.1	51.3
Dissatisfied	4	273	47.5	99.1
Don't know	5	5	0.9	100.0

Q10. Do you believe that it is important for a larger number of Muslims to get involved in the business world today (directly/indirectly) ?

Value Label	Value	Frequency	Percent	Cum. Percen
Strongly believe	(Med) 1	453	78.8	78.9
Believe	2	116	20.2	99.1
Neither	3	4	0.7	99.8
Disbelieve	4	1	0.2	100.0

Q11. How well do you understand the basic objectives of the National Development Policy (NDP) that replaces the former New Economic Policy (NEP) ?

Value Label	Value	Frequency	Percent	Cum. Percen
Very well	1	109	19.0	19.1
General	(Med) 2	359	62.4	81.8
Little	3	84	14.6	96.5
Don't understand	4	13	2.3	98.8
No comment	5	7	1.2	100.0

Q12. How well do you understand the government vision of 2020 (especially its economic policies) ?

Value Label	Value	Frequency	Percent	Cum. Percen
Very well	1	153	26.6	26.7
General	(Med) 2	369	64.2	90.9
Little	3	46	8.0	99.0
Don't understand	4	4	0.7	99.7
No comment	5	2	0.3	100.0

Q13. How well do you understand the government's objectives of introducing the ASN and ASB⁴ schemes ?

Value Label	Value	Frequency	Percent	Cum. Percen
Very well	1	276	48.0	48.3
General	(Med) 2	268	46.6	95.1
Little	3	23	4.0	99.1
No comment	5	5	0.9	100.0

Q14. How well are you aware of the government's efforts/policies toward increasing and distributing the wealth of the nation to the Muslims?

Value Label	Value	Frequency	Percent	Cum. Percen
Very well	1	160	27.8	27.9
Generally	(Med) 2	309	53.7	81.8
Not quite	3	63	11.0	92.8
Not at all	4	4	0.7	93.5
Don't know	5	11	1.9	95.5
No policy	6	26	4.5	100.0

Comments : Having discussed several characteristics of the respondents in our sample in the previous section, it was quite surprising to find that more than 60% of them (supposedly from the professional and business group), seemed to have only a general understanding of some of the major Government's policies that were formulated specifically to enhance their economic well-being. However, this could be attributed to several reasons. For instance, it could be possible that the respondent took a middle-stand in responding, or that they had different perceptions between the meaning of "well understood and general understanding" in the questionnaire. Perhaps, the length of time since these policies were introduced could have also influenced their responses.

⁴The ASN refers to the National Unit Trust while the ASB is the Bumiputera Unit Trust. See Chapter 5 for further discussion on their differences.

Naturally, the older a policy gets, the more exposure it would have received. For instance, the policy on the National Unit Trust (ASN) was introduced in the early 1980s, well before the concept of Vision 2020 and the New Development Policies (NDP), which only came around in early 1990s⁵. Hence, we found that almost 50% of the respondents had a very good understanding of the objectives of ASN and ASB unit trust schemes relative to 19% that responded the same for the NDPs.

However it was also interesting to find that, while their understanding and appreciation of these matters was suspect, almost half of them seemed not to be contented with the community's economic achievements. About 80% of the respondents strongly believed that there was a need for more Bumiputera Muslims to be involved in the business world. Nevertheless, we still need to construct crosstabulations between many of these frequency tables in order to justify our comments. We shall, however, return to this issue in the following chapter.

8.2.4 Part Three - Your Opinion of the Government's Economic Policies

Objective : As mentioned earlier, this part was closely related to the previous and could have been designed as a single section. However the idea was to verify the consistency in the respondent's responses by cross-checking the following related questions against the former. The section was deliberately designed to camouflage with direct queries on their opinions of the Government's general economic policies.

These two sections (together with the previous) were intended to shed further light on the respondents' attitudes, perceptions and their general feelings of the current economic trends and achievements of the Bumiputera Muslims, as well as the economic

⁵ Details of these policies have been discussed in several of the earlier chapters.

policies designed for them. We were also interested to gauge their receptions toward these policies, their expectations of the Government and the roles they felt the latter should play. Information gathered from these sections will then be set against their responses on savings and investment participation in the market. This will then enable us to assess the kind of reactions to be expected, should new Islamic-based financial-market policies or Islamic financial instruments be introduced.

Q15. In general how satisfied are you with the government's economic policies with respect to the Muslims ?

Value Label	Value	Frequency	Percent	Cum. Percen
Totally satisfied	1	15	2.6	2.6
Satisfied	2	252	43.8	47.1
Neither	(Med) 3	172	29.9	77.4
Dissatisfied	4	122	21.2	98.9
Don't know	5	6	1.0	100.0

Q16. How satisfied are you with the government's policies on the ASN/ASB schemes?

Value Label	Value	Frequency	Percent	Cum. Percen
Totally satisfied	1	87	15.1	15.3
Satisfied	(Med) 2	320	55.7	71.8
Neither	3	78	13.6	85.5
Dissatisfied	4	68	11.8	97.5
Don't know	5	14	2.4	100.0

Q17. How satisfied are you with the government's efforts toward encouraging Muslims investment in the stock market ?

Value Label	Value	Frequency	Percent	Cum. Percen
Totally satisfied	1	26	4.5	4.6
Satisfied	2	210	36.5	41.5
Neither	(Med) 3	180	31.3	73.2
Dissatisfied	4	136	23.7	97.2
Don't know	5	16	2.8	100.0

Q18. Do you agree that the ASN/ASB schemes have mostly benefited those whom you regard as already rich ?

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	360	62.6	63.6
Neither	2	112	19.5	83.4
Disagree	3	76	13.2	96.8
Don't know	4	18	3.1	100.0

Q19. Do you agree that the economic gap (wealth) within the Muslim community (intra-community) has widened during the last ten years or so ?

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	366	63.7	64.7
Neither	2	118	20.5	85.5
Disagree	3	59	10.3	95.9
Don't know	4	23	4.0	100.0

Q20. Do you agree that the government needs to revise certain policies in order to narrow the differences in wealth distribution among the Muslims ?

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	502	87.3	89.0
Neither	2	39	6.8	95.9
Disagree	3	14	2.4	98.4
Don't know	4	9	1.6	100.0

Q21. Do you agree that the government should introduce forced-investment among the Muslims in order to increase their investment-participation in the market ?

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	361	62.8	64.0
Neither	2	81	14.1	78.4
Disagree	3	115	20.0	98.8
Don't know	4	7	1.2	100.0

Comments : It was interesting to find that while about 47% of the respondents were satisfied with the Government's economic policies with respect to the Bumiputera Muslims, about the same proportion that responded earlier (in question 9 of Part Two) showed how dissatisfied they were with the community's economic achievements. Our immediate response to such observations was that, although the policies introduced seemed to satisfy the community, the implementation of the policies may not have achieved the desired results. Thus, there need to be further investigations into these figures, requiring the use of inferential statistics to measure their significant relationships and associations. The median in both questions was "neither satisfied nor dissatisfied", that is, a middle-ground between the two extremes.

Further, we also noticed that, while more than 70% were satisfied with the Government's unit trust schemes (the ASN/ASB), at the same time almost 64% who

responded believed the schemes have mostly benefited the "already rich people" rather than achieving its prime objective of distributing wealth and achieving equitable ownership of corporate shares among the many poor Bumiputera Muslims. (These unit trust schemes were supposed to offer the community direct investment opportunity in the capital market). This was strongly confirmed by the responses to the questions that followed. About 63% felt the Bumiputera Muslim's intra-community economic-gap had widened further while more than 87% responded that the situation warrants attention of the policy-makers (to review it's policies of wealth-distribution and equity ownership).

Despite the worrisome figures above, only a small proportion (24%) felt dissatisfied with the Government's efforts toward encouraging Bumiputera Muslims to invest in the stock market. It was also encouraging to learn that a large majority of them (63%) seemed to support the idea of suggesting the Government to introduce a forced-investment policy among the Bumiputera Muslims, in order to increase their investment participation. While some observers felt the idea would be pushing the community to the limits, others believed this could be done through many ways such as increasing the existing obligatory contributions to the employees provident funds or social security deductions.

8.2.5 Part Four - Your Opinion of Investments and the Stock Market in Malaysia

Objective : This was regarded as among the most important sections in the questionnaire. It was tailored to draw information on the religious attitude and perceptions of the Bumiputera Muslim respondents on issues concerning the stock market, their opinions of the stock market in general, their risk-return attitudes with regard to stock market investment, as well as their understanding of the working mechanisms of the capital market itself. The responses will then be set against their

professional and education backgrounds through crosstabulations in the following chapter.

Q22. The stock market is one of the most important means for a society to mobilise their resources and improve their economic well-being.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	334	58.1	58.3
Neither	2	124	21.6	79.9
Disagree	3	96	16.7	96.7
Don't know	4	19	3.3	100.0

Q23. Not many Muslims really understand or appreciate the functions and working of the stock market.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	518	90.1	90.4
Neither	2	43	7.5	97.9
Disagree	3	7	1.2	99.1
Don't know	4	5	0.9	100.0

Q24. The government has not done enough to encourage Muslims toward direct participation and investment in the stock market.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	379	65.9	66.3
Neither	2	129	22.4	88.8
Disagree	3	53	9.2	98.1
Don't know	4	11	1.9	100.0

Q25. Religious reasons prevent a large number of Muslims from participating in the stock market.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	331	57.6	57.9
Neither	2	98	17.0	75.0
Disagree	3	126	21.9	97.0
Don't know	4	17	3.0	100.0

Q26. Muslims who participate in the stock market are more interested in the short-term capital-gain than long-term equity participation.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	448	77.9	78.2
Neither	2	70	12.2	90.4
Disagree	3	23	4.0	94.4
Don't know	4	32	5.6	100.0

Q27. The stock market is more a place for speculative short-term investments.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	358	62.3	62.5
Neither	2	112	19.5	82.0
Disagree	3	87	15.1	97.2
Don't know	4	16	2.8	100.0

Q28. It is better and less risky to invest in assets like houses, land or other business activities than the stock market.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	374	65.0	65.2
Neither	2	123	21.4	86.6
Disagree	3	70	12.2	98.8
Don't know	4	7	1.2	100.0

Q29. A large percentage of Muslims who have not participated in the ASN/ASB schemes believe that the schemes indulge in illegitimate (haram) activities.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	293	51.0	51.1
Neither	2	103	17.9	69.1
Disagree	3	137	23.8	93.0
Don't know	4	40	7.0	100.0

Q30. If an Islamic-based stock market existed, a large number of Muslims would participate in its trading and holding of shares.

Value Label	Value	Frequency	Percent	Cum. Percen
Agree	(Med) 1	396	68.9	69.1
Neither	2	103	17.9	87.1
Disagree	3	42	7.3	94.4
Don't know	4	32	5.6	100.0

Q31. What is your opinion of the existing stock market from an Islamic perspective?⁶

Category Label	Code	Count	Percent of Responses	Percent of Cases
Unacceptable	1	59	6.1	10.3
Acceptable with Islamic counters (Mode)2	2	331	34.0	58.0
Acceptable due to situation	3	140	14.4	24.5
Acceptable	4	184	8.6	14.7
No definite Islamic rulings	5	216	22.2	37.8
Confused	6	81	8.3	14.2
No comment	7	31	3.2	5.4
Others	8	31	3.2	5.4
Total multiple responses :		973	100.0	170.4

Comments : There were ten questions constructed for this section. Here again, we found that, while almost 60% agreed that the stock market was one of the most important means to mobilise Bumiputera Muslims' financial resources, more than 90% believed majority of the community did not really understand or appreciate the functions and working mechanisms of the institution.

On the question that followed, the response posed a paradox with an earlier question in part three, where more than 66% agreed the Government had not done enough to encourage Bumiputera Muslims toward direct participation and investment in the capital market. Earlier in question 17, we saw that only 24% were dissatisfied with the Government's efforts to encourage the same. However, upon checking the two variables further by crosstabulation, they seemed to indicate a very significant relationship, implying the possibility that those indecisive "fence-sitters" in the previous question might have opted for a different answer this time.

⁶ The labels in this question have been abbreviated for convenience of presentation. For further details, see the complete questionnaire in Appendix C.

On the question whether religion had been the main factor in preventing a large number of Bumiputera Muslims from participating in the stock market, the proportion agreeing was overwhelming. Almost 60% of the respondents agreed while another 17% were undecided. The feelings were further supported by their response in question 29, where more than half felt the same way for those who did not participate in the Government-owned unit-trust schemes of the ASN and ASB. As explained in earlier chapters, both these schemes participated in managing investment portfolios that include interest-bearing financial instruments and financial institutions.

In question 30, we sought opinions on a hypothetical situation, inquiring whether they felt a large number of Bumiputera Muslims would participate in the trading and holding of shares, should there exist an Islamic-based stock exchange. The response was indeed significant as almost 70% agreed. However, what was interesting to note (and indeed perplexing) was the fact that, despite the overwhelming feelings showed in support of the Islamic institution, only 10% felt the existing stock exchange was unacceptable, while another 24% claimed the current environment and economic situations compelled them to accommodate and condone trading in it. Nevertheless, almost 60% would only accept those counters which are Islamically legitimate; that is, counters which avoid direct interest-bearing involvement and the sale of Islamically illegitimate merchandise, such as the finance and the hotel industries.

Questions 26 to 28 attempted to draw information on the respondents attitudes toward investment and they clearly reflected the risk-averse attitude of the Bumiputera Muslims in relation to capital market investments. The responses showed the respondents high preference to invest in safer or less risky investments such as houses (which in Malaysia, have seldom experience depreciation in nominal terms) and land. Their investments in the stock market were generally for speculative opportunities to make some "quick kills" or for short term capital-gains rather than for long-term growth and dividend yields. As seen in chapter five, although the proportion of Bumiputera

Muslims involvement in the ASN and ASB unit-trust schemes has been relatively large, the investment in these schemes was regarded as almost riskless due to the Government's protection and support.

8.2.6 Part Five - Your Savings Background

Note : Saving has been defined in the questionnaire as the difference between one's income and one's consumption. It is money that one puts aside at one's own disposal for some future use, in a bank or any institution that generally bears negligible risk of it being lost or depleted.

Objective : Parts five and six were straight forward queries seeking information about the respondents involvement in the financial market of Malaysia, both in terms of savings and investment. The objective in asking about savings was not only to know the amount involved, but more importantly, to measure their marginal propensity for savings versus consumption and investment, relative to their background information on income, education, profession, dependants and others. We defined savings as above to maintain consistency and include the holding of insurance policies as a form of savings (rather than investment) as most policy holders in Malaysia regarded it as such.

Q32. Do you keep any savings ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	547	95.1	95.1
No	2	28	4.9	100.0

Q33. What would you regard your savings pattern to be ?

Value Label	Value	Frequency	Percent	Cum. Percen
Monthly	(Mode)1	252	43.8	47.6
Regular	2	121	21.0	70.5
Irregular	3	150	26.1	98.9
Others	4	6	1.0	100.0

Q34. Why do you save ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
For mishaps	1	203	19.2	38.2
Future use	2	173	16.4	32.6
Pension plan	3	57	5.4	10.7
Children educ.	(Mode)4	210	19.8	39.5
Future Invst.	5	116	11.0	21.8
For Hajj trip	6	81	7.7	15.3
All the above	7	205	19.4	38.6
Others	8	13	1.2	2.0
Total multiple responses :		1058	100.0	199.2

Q35. On the average, what percentage of your total income do you save each time ?

Value Label	Value	Frequency	Percent	Cum. Percen
Less than 5%	1	129	22.4	24.4
5 - 10%	(Med) 2	241	41.9	70.1
10 - 15%	3	77	13.4	84.7
More than 15%	4	81	14.1	100.0

Q36. What is the total value of all your savings (excluding investments) as of (date) ?

Value Label (in RM '000)	Value	Frequency	Percent	Cum. Percen
Less than \$5	1	161	28.0	30.4
\$5 - 10	(Med) 2	119	20.7	52.9
\$10 - 20	3	91	15.8	70.1
\$20 - 30	4	39	6.8	77.5
\$30 - 50	5	45	7.8	86.0
\$50 - 70	6	24	4.2	90.5
More than \$70	7	50	8.7	100.0

Q37. Which of the following institutions do you have your savings in ?

Value Label	Value	Frequency	Percent	Cum. Percen
Non-Islamic institutions	1	165	28.7	31.5
Islamic inst.	2	66	11.5	44.2
Mixed	(Mode)3	292	50.8	100.0

Q38. Do you regard rate of return on your savings as an important criteria in your choice of institutions that you save ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	1	209	36.3	39.4
No	(Mode)2	321	55.8	100.0

Q39. If you do have an account in a bank, which type of account/s do you keep ?

Value Label	Value	Frequency	Percent	Cum. Percen
Non-Islamic accounts	(Mode)1	380	66.1	67.3
Islamic accnts.	2	50	8.7	76.1
Mixed accounts	3	135	23.5	100.0
Not Answered	9	10	1.7	Missing values

Q40. If you do have an account with the Islamic bank, which of the following made you choose the bank ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Interest-free	(Mode)1	144	65.2	77.4
Media influence	2	7	3.2	3.8
Convenience	3	30	13.6	16.1
Good service	4	11	5.0	5.9
No reason	5	9	4.1	4.8
No comment	6	12	5.4	6.5
Others	7	8	3.6	4.3
Total multiple responses :		221	100.0	118.8

Q41. What is your opinion of Bank Islam Malaysia ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
No comment	0	79	6.3	14.2
Promising bank	1	212	17.0	38.1
Professional	2	29	2.3	5.2
An alternative	(Mode)3	365	29.2	65.6
Competitive	4	43	3.4	7.7
Not an Islamic bank as claimed	5	90	7.2	16.2
As interest bank	6	185	14.8	33.3
Noncompetitive	7	152	12.2	27.3
Unprofessional	8	93	7.5	16.7
Total multiple responses :		1248	100.0	224.5

Comments : From the figures above, we noticed that more than 95% of the respondents kept savings and about 71% of these were saving regularly, though not necessarily on a monthly basis. Nevertheless, in terms of the quantum of savings they held, the amount was not significant enough to warrant any attention. Of all the savers, about 53% had a total savings of less than RM10,000 (£2,500) only, while 17% of the others had savings of between RM10,000 (£2,500) and RM20,000 (£5,000), with the remaining 30%

having more than RM20,000 (£5,000). These figures were found to be reasonably accurate, considering that almost 70% of them were saving less than 10% of their monthly earning. A cross-check against their monthly income, marital status, number of dependants and age also showed very significant correlations.

Although we initially suspected that most of the income would either have been consumed or invested elsewhere in institutions offering higher returns, almost 61% of the savers felt the return on savings was not important for them. This led us to investigate further their reasons for savings and for using the institutions in which they have chosen to save.

As in all previous discussion, whenever there was more than one response offered to a question, unless otherwise mentioned, we shall note the percentage of cases rather than percentage of responses because the former would give a more accurate indication of the result. As to the reasons for savings, it was interesting to find that, an almost equal percentage of about 40% responded to keep savings for "mishaps", "children's education", "future use", and "all the above". Only a small percentage of 22% indicated they did so for future investment purposes. This probably explained their choice of savings institutions, where the Islamicity of these institutions did not matter much. Besides, the returns from the savings account were also considered insignificant. We saw that more than 87% chose either the conventional commercial banks or maintained multiple accounts of these banks with some other Islamic institutions such as the Bank Islam Malaysia, Islamic co-operative society and the Hajj Pilgrimage Funds (or Tabung Haji⁷). In general, it was typical of the Muslim community to maintain current-accounts with the conventional banks and savings-accounts with the Bank Islam Malaysia. At the same time, it was also important to note that barely 13% of the respondents saved solely in the Islamic bank or organisations. The insurance institutions

⁷ See Chapter 5 for explanation of Tabung Haji.

also reflected the same situation where only 6% had chosen to hold the Islamic insurance policies relative to 16% with the conventional insurance companies.

Our initial analysis encouraged us to check whether the responses seen so far, were by any means an indication of the Bumiputera Muslims' perceptions or attitudes toward anything that was considered Islamic. Our earlier observations, in the previous sections that queried their "attitudes and beliefs", indicated that the responses given to ideas and policies which suggested the introduction of an Islamic-based financial institution seemed to show overwhelming support. Here again, there appeared to be another paradox because the behaviours of the respondents (as reflected in this section) did not seem to correlate with their earlier beliefs or desires. It is thus important for us to analyse and investigate the matter further to determine whether the sentiments and sensitivities shown in desiring an Islamic alternative had been merely emotional and rhetoric, or whether they represented any significant commitment. Our initial feelings was that, had the commitment been serious, it should have at least been manifested in the choice of institutions in which the respondents had saved or invested.

On the other hand, several plausible reasons could also be offered to explain the situation. For instance, it could be possible that the number of Islamic banks and institutions in the country were still very limited and did not offer competitive products or services that appealed to them⁸. Secondly, it was also probable that the Muslim community was not ready to compromise on the quality of services offered by the Islamic institutions relative to the non-Islamic ones. Further, if the account-holders were merely having current accounts, the general feelings among the Muslims was, it would not have made much difference for the type of banks they kept in because, considering

⁸ Note that the interest-free banking schemes and the Islamic banking system were yet to be introduced at the time the survey was conducted.

the volatility of current accounts, there would have been negligible effects for the funds being mobilised in whichever banks that were involved.

Next, we checked the respondents' opinions of the Bank Islam Malaysia. From those who have had accounts with the bank, we wished to determine the reasons why they chose the bank in the first place. Interestingly, of the 186 cases that responded to the question, more than 77% indicated that it was due to the interest-free nature of the bank's operations. However, when queried on their opinions of the bank itself, almost 66% indicated it provided an alternative for those who were Islamically-conscious, while 33% believed that it was just like any other conventional bank apart from using Islamic terminologies to build a market niche. Some felt that it was not competitive at all and only 5% indicated it was professional enough to exist as another commercial bank.

All these results showed mixed feelings within each respondent, that is, while the sentiments toward Islamic-based institutions (such as the Bank Islam Malaysia) were encouraging, many were not ready to manifest their Islamic convictions into practice. In short, apart from their preference for an alternative Islamic financial institution (should it exist), the general yardstick to determine their support or participation in it was still professionalism and material rewards. The initial responses also indicated that generally, the Bumiputera Muslims would not compromise and were not prepared to sacrifice for anything less than what the conventional financial institution could offer relative to an Islamic alternative. These included the quality of services, convenience in getting those services, competitive products, innovation in product design and competitive costs and returns from both the products and services.

8.2.7 Part Six - Your Investments Background

Note : Investment was defined in the questionnaire as the commitment of money to buy an asset for a period of time in order to derive expected higher future returns.

Objective : This was the largest section and was regarded as the most important part of the whole questionnaire. It has a total of eighteen questions in all. As with savings, this part was not merely meant to draw figures on the amount of investment they made or have, but more importantly, to draw inferences (with the other parts) about their investment behaviours and characteristics in relation to the issues under study. We sought to draw some conclusions on the abstract hypothetical theory put forth, and to test the validity of the hypotheses defined in the previous chapter.

Earlier, we theorised that among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market include issues such as their (i) lack of investible financial resources, (ii) preference for investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) the impression that investing in stocks was equivalent to gambling and hence, not permissible in Islam.

In addition, it would be equally interesting to analyse and gauge whether there would be any meaningful response from the Bumiputera Muslims, should there be an alternative Islamic-based capital market. In other words, to what extent would the Bumiputera Muslims be willing to accept the possibility of receiving lower returns from investing in a *Shari'ah-constrained* investment portfolio relative to the well-established conventional financial instruments. In short, we would attempt to gauge from the sample, the community's level of religious commitment and their readiness (or willingness) to sacrifice material returns in order to uphold their religious convictions.

Earlier, we saw this was not the case when we enquired the respondents' savings behaviours and the choice of savings institutions.

Q42. Which of the following statement/s do you agree with ?

Value Label	Value	Frequency	Percent	Cum. Percen
Saving is important	1	52	9.0	9.2
Invest is important	2	72	12.5	21.8
Equal importance	(Mode)3	403	70.1	92.8
Saving is first	4	18	3.1	96.0
None of the above	5	4	0.7	96.7
No comment	6	19	3.3	100.0

Q43. Do you hold any form of investment ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	532	92.5	92.5
No	2	43	7.5	100.0

Q44. Which of the following forms of investment do you hold ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Houses	(Mode)1	419	29.8	79.2
Land	2	186	13.2	35.2
Agri. business	3	20	1.4	3.8
Jewellery	4	71	5.0	13.4
Business	5	75	5.3	14.2
ASN/ASB	6	398	28.3	75.2
KLSE	7	221	15.7	41.8
Others	8	16	1.1	3.0
Total multiple responses :		1406	100.0	265.8

Q45. Of all the investments you hold, which of the following would you regard as most important to you ?

Value Label	Value	Frequency	Percent	Cum. Percen
Houses	(Mode)1	275	47.8	52.7
Land	2	39	6.8	60.2
Agri.business	3	3	0.5	60.7
Jewellery	4	1	0.2	60.9
Business	5	33	5.7	67.2
ASN/ASB	6	137	23.8	93.5
KLSE	7	31	5.4	99.4
Others	8	3	0.5	100.0

Q46. How knowledgeable and well-informed are you on the investment that you have regarded as most important in Q45 ?

Value Label	Value	Frequency	Percent	Cum. Percen
Professional	1	59	10.3	11.4
Knowledgeable	2	186	32.3	47.2
Gen. knowledge (Mode)	3	233	40.5	92.1
Well Informed	4	19	3.3	95.8
Uninformed	5	7	1.2	97.1
No knowledge	6	2	0.3	97.5
No comment	7	13	2.3	100.0

Q47. On average, what % of your total annual income do you invest in a year ?

Value Label	Value	Frequency	Percent	Cum. Percen
Less than 5%	1	126	21.9	24.5
5 - 10% (Med)	2	197	34.3	62.8
10 - 15%	3	79	13.7	78.2
More than 15%	4	112	19.5	100.0

Q48. What is the total value of all your investments (excluding savings but including houses, land, etc.) to date ?

Value Label (in RM '000)	Value	Frequency	Percent	Cum. Percen
Less than \$25	1	93	16.2	17.9
\$25 - 50	2	52	9.0	27.9
\$50 - 100	3	99	17.2	46.9
\$100 - 200 (Med)	4	125	21.7	71.0
\$200 - 300	5	68	11.8	84.0
\$300 - 500	6	55	9.6	94.6
More than \$700	7	28	4.9	100.0

Q49. Do you have any investment in the stock market (including ASN/ASB shares) ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	445	77.4	83.8
No	2	86	15.0	100.0

Q50. Why don't you invest in the stock market ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Faith /Religion	(Mode)1	37	30.8	44.0
Too risky	2	17	14.2	20.2
Little knowlege	3	13	10.8	15.5
Too speculative	4	9	7.5	10.7
Others better	5	2	1.7	2.4
Lack of capital	6	37	30.8	44.0
Brokerage fee	7	1	0.8	1.2
Others	8	4	3.3	4.8
Total multiple responses :		120	100.0	142.9

Q51. Of all the investments you hold what percentage lies in stocks and shares (including ASN/ASB shares) ?

Value Label	Value	Frequency	Percent	Cum. Percen
Less than 5%	1	124	21.6	29.0
5 - 10%	(Med) 2	108	18.8	54.3
10 - 20%	3	60	10.4	68.4
20 - 30%	4	48	8.3	79.6
30 - 50%	5	47	8.2	90.6
More than 50%	6	40	7.0	100.0

Q52. How knowledgeable and well-informed are you of the stock market investments?

Value Label	Value	Frequency	Percent	Cum. Percen
Professional	1	31	5.4	7.1
Knowledgeable	2	92	16.0	28.2
Gen. knowledge	(Med) 3	256	44.5	86.9
Well Informed	4	23	4.0	92.2
Uninformed	5	31	5.4	99.3
No knowledge	6	3	0.5	100.0

Q53. Which of the following describe you best as an investor ?

Value Label	Value	Frequency	Percent	Cum. Percen
Long term	(Mode)1	210	36.5	48.7
Short term	2	129	22.4	78.7
Speculator	3	11	1.9	81.2
All the above	4	34	5.9	89.1
None of the above	5	24	4.2	94.7
Don't know	6	23	4.0	100.0

Q54. Which of the following counters on the KLSE attract you most ?

Category Label ¹	Code	Count	Percent of Responses	Percent of Cases
Industrials	(Mode)1	325	55.9	84.4
Finance	2	115	19.8	29.9
Property	3	133	22.9	34.5
Hotel	4	3	0.5	0.8
Oil Palm	5	4	0.7	1.0
Rubber	6	1	0.2	0.3
Total multiple responses :		581	100.0	150.9

Note : ¹The survey was conducted prior to the restructuring of the KLSE's listed companies from the above format into eleven new sectors beginning September 1993.

Q55. Do you hold any shares of the Islamic bank ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	1	27	4.7	6.2
No	(Mode)2	407	70.8	100.0

Q56. What is the average market value of all your shares (including ASN/ASB shares)?

Value Label (in RM '000)	Value	Frequency	Percent	Cum. Percen
Less than \$5	1	88	15.3	20.9
\$5 - 10	2	66	11.5	36.5
\$10 - 20 (Med)	3	64	11.1	51.7
\$20 - 30	4	46	8.0	62.6
\$30 - 50	5	45	7.8	73.2
\$50 - 70	6	42	7.3	83.2
More than \$70	7	71	12.3	100.0

Q57. Do you have any investment in the ASN/ASB ?

Value Label	Value	Frequency	Percent	Cum. Percen
Yes	(Mode)1	397	69.0	90.2
No	2	43	7.5	100.0

Q58. Why do you invest in the ASN/ASB ?

Category Label	Code	Count	Percent of Responses	Percent of Cases
Less risky	(Mode)1	195	34.4	49.6
Higher returns	2	152	26.8	38.7
Secured	3	87	15.3	22.1
Best choice	4	29	5.1	7.4
All the above	5	95	16.8	24.2
No comment	6	9	1.6	2.3
Total multiple responses :		567	100.0	144.3

Q59. Why don't you invest in the ASN/ASB ?

Value Label	Value	Frequency	Percent	Cum. Percen
Not eligible	1	5	0.9	12.2
Others better	2	12	2.1	41.5
UnIslamic	(Mode)3	13	2.3	73.2
Lack of capital	4	8	1.4	92.7
Other reasons	5	3	0.5	100.0

Comments : To the question on the priority between savings and investment, more than 70% felt that they were equally important, while 13% still believed investment should supersede savings. The sample had a very large proportion of investors with 93% (532) of the sample claiming to have some form of investments. However, not all of them were holding shares or unit trusts in the capital market. In fact, only 77% (445) were engaged in the shares transaction while the remainder preferred the various other forms

of investment alternative. When this variable was crosstabulated with the variable on savings, we noticed that about 90% of all those who have had savings also claimed to have investments. However, the relevant point to keep note should be on the type, quantity and quality of investments they possessed rather than on the volume or proportion of the respondents as investors.

Looking at the investment type, as expected 79% of the sample respondents had investments in houses, 35% had land, while 75% of them had stakes in the Government-supported unit-trust schemes of the ASN/ASB⁹. However, only 42% had direct investment in the Kuala Lumpur Stock Exchange (KLSE). The important point to note was the fact that, despite the relatively high figures recorded in unit trust investments and the KLSE taken together, more than half of them (53%) still regarded investment in houses as their most important asset relative to 26% in the unit trust schemes, and about 6% in the KLSE. These facts clearly reflected the dominant cultural attitude of the Bumiputera Muslims in Malaysia, who would rather have their life-long savings or investment in houses than in the speculative risky investment of the equity markets. The irony of the fact was that, despite such emphasis, only 11% claimed to have a professional knowledge of their investment choice (that is, knowledge in the housing market). Another 80% only had some basic general knowledge, let alone professional information. In other words, the choice of purchasing (or investing in) a house was not so much an investment, but more so as a form of savings, or security for retirement/old age. It could also be possible that the community was only submitting to the common cultural trends that regarded houses (and cars) to reflect one's social status (hence, their priority over other forms of investment).

Turning to the investment level, of those having investments, about 25% had less than 5% of their annual income invested and the median for the variable was

⁹ As elaborated in Chapter 5, due to the nature of these unit-trust schemes and the support they received from the Government, the schemes have always recorded very high investment returns.

between the 5% and 10% band. This should not be surprising especially when we considered that : firstly, a large percentage of them only had houses as their main investment; and secondly, the cost of houses in large towns and cities such as Kuala Lumpur (where most of the respondents lived) were very expensive. Perhaps such responses also explained the breakdown in the distribution of their investments total value. For instance, more than 24% of them had investment values of between RM100,000 - RM200,000 (£25,000 - £50,000) which was a typical price range for an upper middle-income house in the city. Cross checking the information with the average market value of their shares further confirmed our expectation. Almost 52% of these investors had shares worth less than RM20,000 (£5,000) (a small sum indeed by any margin), implying that the bulk of the funds must have been invested in houses. It was also not surprising to see that only about 17% had investment in shares valued at more than RM70,000 (£17,500) as this seemed to be in tandem with the proportion that had total investments valued at more than RM200,000 (£50,000). In short, when we compared the total value and total percentage of the respondents' total investments distribution, it was very obvious that a substantial proportion of the funds had been invested in houses and other assets rather than the corporate equities. It was also not difficult to imagine that most of the capital invested in the latter would very likely be channelled into the almost riskless investments of the ASN/ASB unit trust schemes. This was because more than 90% of the respondents were involved in the schemes.

We next inquired about the respondent's knowledge of the stock market, as well as the reasons for not investing in either the unit trust schemes or the other shares traded on the KLSE. Of the mere 86 cases that did not have any investment in the capital market at all, 44% claimed that "religious convictions and lack of capital" were the factors preventing them from participating. Although 44% was a relatively high figure, these involved only 37 cases as compared with the remaining 445 cases having investments. Here again, when we compared the reasons given between those who did have investments in the ASN/ASB against those who did not, we noticed that risk and

return factors were the overriding criteria for their choice of investment. Out of those 41 cases that did not even have any investment in the (almost) riskless ASN/ASB unit trust schemes, a mere 32% (or 13 cases) claimed "religion" to be the deterring factor, while about 30% believed other forms of investment could offer better returns. This tended to confirm our initial findings that the religious factor did not seem to play a major role in determining one's involvement in the share market. We thus need to look further into other factors such as risk, capital, knowledge and many others so as to gain a better picture of the whole situation.

8.3 Conclusion

The descriptive univariate analysis in this chapter is considered to be the first stage in the process of our data analysis. At such an initial stage, it is quite common to find more questions being produced than answers. As seen earlier, there were several unexpected patterns of responses found in the data set, and these included : variables that logically should have been related were not, correlations were sometimes weaker than expected, and some patterns even seemed to contradict one another, while others were simply inexplicable. We thus need to account for these initial set of observations and develop logical explanations to relate the findings. For example, if the sample distribution on some sociodemographic variables such as sex, age, marital status, education and income were extremely skewed, this could reveal certain biases in the sampling frame which need to be taken into account when conducting the inferential statistical analysis later.

At the outset, the variables have been prepared in a form that would be suitable for use in addressing the research questions. The data were organised, coded and verified before being processed, and in some instances, categories of variables were collapsed and re-coded to form new variables. The objective of a descriptive analysis is

usually to describe (or to build a picture of) the nature and characteristics of the sample under study, and this has been achieved by describing the frequency distribution of each of the variables constructed, hence the term *univariate analysis*.

The aim of this chapter was to summarise patterns in the responses of people in the sample. However, no attempt has been made to infer the characteristics of the respondents on the population. This will be the function of inferential statistics, which is to provide an idea about whether the patterns described in the sample were likely to represent the population from which the sample was drawn. The next chapter attempts to conduct this analysis.

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CHAPTER 9

SOCIO-DOMICILE INFLUENCES AND SHARED VALUES OF BUMIPUTERA MUSLIM INVESTORS IN MALAYSIA : A BIVARIATE ANALYSIS

9.1 Introduction

Having examined the distribution of values for particular variables through the use of frequency tables and associated statistics in the previous chapter, a major strand in the follow-up analysis of a set of data is usually the bivariate analysis, that is, how two variables are related to each other. While the emphasis on descriptive univariate analysis involves the reporting of results of the survey by examining data and describing how respondents vary in their responses to each question, a bivariate analysis will attempt to draw some conclusions about the population on the basis of what has been observed. It will also clarify the underlying reasons for an association, the strength and the direction of the association, as well as the significance of the relationship.

The objectives of this chapter are three fold : firstly, to test the independence of responses to the questionnaire from two unrelated groups of respondent within the sample; secondly, to measure the association as well as to explore the presence of any significant relationships between several pairs of variables within the hypothetical model, described earlier in chapter seven; and finally, to test the significance and degree of influence (on the dependent factor) from the remaining set of variables that have not been included in the model.

The chapter has been organised into five sections. Section two will outline the theory and detail methods applied in the analysis as well as the statistical tests used in

testing pairs of nominal and ordinal variables. This is followed by sections three and four, explaining the findings of the various tests mentioned. Finally, section five provides the summary and conclusion for the chapter.

9.2 Methods of Analysis

The basic objective of any bivariate analysis is to determine whether two variables are in any way associated or related. The technique provides us with a systematic way of measuring such association. There are several methods of analysis and statistics that can be used in assessing the association of variables and each alternative method simply differs in the way the association is assessed. In this study, we shall focus on one of the most frequently used methods of bivariate analysis in demonstrating the presence or absence of a relationship, that is, the *crosstabulation*. It is sometimes called a *contingency table* and is a very effective way of displaying the values of two or more variables at the same time.

Two variables are said to be associated or related when the difference of values on one variable differs for different values of the other. When two variables are related, knowing the value of one variable is helpful in predicting the value of the other variable. However, the existence of a relationship between two variables does not necessarily mean that one causes the other; in other words, *establishing an association between two variables does not prove that they are causally related*. We usually need a host of other information to determine causality and this will be discussed elsewhere.

Earlier we have seen that different measures of association are appropriate depending on the level of measurement of the variables being considered. We have also discussed in considerable detail in chapter seven, the kind of statistics to be used when

both variables are nominal or ordinal, or when the levels of measurement are mixed. We shall now summarise it in the form of a table for easy reference :

Table 9.1
Guidelines for Selecting Measures of Association

Level of Measurement	Shape of Variables	Appropriate Methods	Descriptive Statistics	Inferential Statistics
1.Nominal and Nominal	(2 X 2)	Cross-tabulations	Phi, Lambda, Goodman & Kruskal's tau	Chi-square
2.Nominal and Nominal	(3+) X (2+)	Cross-tabulations	Lambda, Cramer's V G'man/Kruskal's tau	Chi-square
3.Nominal and Ordinal	Nominal variables (3+)	Cross-tabulations	Theta and any in no. (2) above	Mann-Whitney Kruskal-Wallis
4.Ordinal and Ordinal	Both few categories	Cross-tabulations	Gamma, Kendall's tau-b and tau-c	Significant test of Gamma & tau
5.Ordinal and Ordinal	Both many categories	Rank correlation	Kendall's tau & Spearman's rho	Significant test of tau & rho

Source : De Vaus (1993).

9.2.1 Statistical Inference

Once we have measured whether two variables are associated in our sample, we may wish to know whether they are likely to be as strongly associated in the population from which the sample was drawn, that is, we may wish to infer upon our population parameters, and this is done by the *tests of significance*. There are several different tests of significance that have been developed for use with different measures of association and these have also been summarised in table 9.1 above. Notice that each must be employed according to the level of measurement and the shape of the variables being analysed. The table also indicates which measures of association should be used in conjunction with particular tests of significance.

It is important to recognise the difference between *measures of association* and *tests of significance*. While the former describes the extent of association between two variables, the latter tells us whether that relationship is likely to hold in the population

from which the sample was drawn, or whether it is probably due to sampling error. In analysing data, it is important to look at both measurements, for one without the other does not provide a complete picture. For example, the test of statistical significance simply denotes the probability of a relationship that is likely to be seen in the population, but it does not say anything about the strength, nature or direction of that relationship. Similarly, a strong measure of association between two variables may not necessarily hold in the population unless tested for its significance. However, not all variables can be described in full. For example, the description of direction can only be described with ordinal or interval variables but not with nominal variables. (Recall that our data set did not include any interval variables, instead it was made up of 34 nominal and 38 ordinal variables).

9.2.2 Testing Hypotheses about Independence

In parts three and four of this chapter, we shall be exploring the differences or the independence of responses (or scores) recorded from two unrelated samples, and between two variables (within and without the model), respectively. In other words, we wish to determine whether the differences between the distribution of the two groups are statistically significant. Thus, our null-hypothesis will be "*that the distribution of scores between the column variable is independent of the row variable*" while the alternative hypothesis says otherwise. There is a relatively large number of statistical tests that can be used for this purpose. In deciding which is the most appropriate, it is again necessary to consider the levels of measurement. For example, if the data was of a categorical or *nominal* nature, it is only possible to use *non-parametric tests*. It has been suggested that parametric tests could only be used with at least ordinal variables since tests apply to numbers and not to what those numbers signify¹. Since it does not make sense to

¹ For further discussion, see Lord (1953).

compute the mean for a nominal variable, hence we were not be able to perform the *t*-test, and this led us to look for an alternative.

One of the most commonly used non-parametric tests in testing hypotheses of independence is the *Pearson's chi-square test*. Apart from this, the *Mann-Whitney U* test is also used in testing for independence of two unrelated samples. When the number of samples gets larger than two, the *Kruskal-Wallis* test is the appropriate choice. A fuller description of non-parametric tests can be found in Siegel (1956) and Conover (1980).

9.2.2.1 The Chi-square Test

The chi-square test is used for the purpose of testing hypotheses concerning *goodness-of-fit* and concerning the *independence* of two variables. As a general hypothesis-testing procedure, use of the chi-square test always involves comparison of *observed sample frequencies* (entered in defined data categories of a contingency table), with the *expected frequencies* for these categories, based on the assumption that the null-hypothesis is true. While the goodness-of-fit test is concerned with one random variable, the test for independence involves two or more variables. Thus, the chi-square test can be used to test the null-hypothesis that two variables are statistically independent.

The differences between the observed frequencies and the expected frequencies serve as the basis for a chi-square test. A significant chi-square test statistic is interpreted to mean that the observed distribution (or pattern) of frequencies does not conform to the hypothesised distribution. Since the chi-square probability distribution is a continuous distribution, while the data analysed in the chi-square test are discrete, the chi-square test statistic follows the form of the chi-square distribution only approximately. However the problem is generally considered to be minor if the expected frequency for every cell of the analysis table is at least 5 (cases).

Apart from this, there are several other limitations of chi-square which need to be considered in interpreting the results of the tests². First, chi-square is not a strong statistic in that it does not convey information about the strength of a relationship. By strength is meant that a large chi-square value and a correspondingly strong significance level (for example, $p < 0.001$) cannot be taken to mean a closer relationship between two variables than when chi-square is considerably smaller but moderately significant (for example, $0.001 < p < 0.05$). What it is telling us is how confident we can be that there exists a relationship between the two variables.

Second, the combination of a crosstabulation table and a chi-square is most likely to occur when either both variables are nominal, or when one is nominal and the other is ordinal. When both variables are ordinal or interval, other approaches to the elucidation of relationships, such as correlation which allows strength of relationships to be examined and which therefore conveys more information, are likely to be preferred.

Third, chi-square has to be adapted for use in relation to a 2 X 2 table where a different formula is employed using what is called the "*Yates Correction for Continuity*". When SPSS is used to calculate chi-square for such a table, two sets of computation are provided - one with and one before Yates's correction, but normally the results of the former should be used due to the size of the table. If any of the expected values (or number of cases) in a table with just two rows and two columns is less than 5 (cases), SPSS will then automatically performs an additional test called the *Fisher's exact test*.

Finally, another problem with chi-square is the fact that the size of the result is affected by the sample size and table size (or degrees of freedom) involved. Whenever

² See Bryman (1990 : pp. 161-162).

the sample is too small, we will not be able to detect even large differences. On the other hand, if the sample size is very large (as we presume our sample was), even small differences can be statistically significant. Due to the various problems inherent in the application of the chi-square test, as we shall see later, different measures have been developed to provide alternatives to the method.

9.2.2.2 The Mann-Whitney *U* Test (for two independent samples)³

The Mann-Whitney test, also known as the *Wilcoxon test*, has been developed to test the null-hypothesis that *two independent random samples* have been drawn from the same population, or from two populations with the same distribution. The test only requires the observations to be a random sample and one of the variables to be ordinal. If it is assumed that two samples are obtained from populations with the same form and dispersion, any difference would result only from the difference in the (median) location of the two distributions. In other words, the Mann-Whitney test is the non-parametric equivalent to using *Student's-t distribution* for testing the difference between the means of two independent samples. This test is also more powerful than the median test because it compares the number of times a score from one of the samples is ranked higher than the number of scores which are above the median.

9.2.2.3 The Kruskal-Wallis Test (for several independent samples)⁴

The Kruskal-Wallis test can be viewed as an extension of the Mann-Whitney test when there are *more than two populations*. The null-hypothesis tested is that, several populations have the same distribution, with the alternative hypothesis being that at least one population is different. If the assumption made is that, all the populations have the

³ For further discussion, see Kazmier (1987).

⁴ For further discussion, see Kazmier (1987).

same form and dispersion, the rejection of the null-hypothesis would then indicate that the populations are, in fact, different in forms. In this respect, the Kruskal-Wallis test is considered as the non-parametric equivalent of the one-factor completely randomised design of the analysis of variance (ANOVA).

9.2.3 Measuring Association

Statistics that are used to quantify the strength and nature of a relationship between two variables in a crosstabulation are called *measures of association*. There are many different measures of association since there are many different ways to define association. The measures differ in how they can be interpreted and in how they define perfect and intermediate levels of association. No single measure of association is best for all situations. A particular measure may have a low value for a given table, not because they are not related but because they are not related in the way to which the measure is sensitive. When selecting an index of association for a given table, the type of data, the hypothesis of interest, as well as the properties of the various measures, must all be considered. It is not, however, reasonable to compute a large number of measures and then to report the most impressive as if it was the only one examined.

9.2.3.1 Measures of Association for Nominal Variables

Earlier we mentioned the use of chi-square statistics to test the null-hypothesis that two categorical variables are independent. We have also discussed the shortcomings of the test where the sample size influences the value of the chi-square. However, there are two other types of measures that have been developed to overcome these problems, namely, the *chi-square based measures* and another that follows the logic of *proportional reduction in error* (PRE). The former measures attempt to modify the chi-square statistic to minimise the influence of sample size and degrees of freedom. At the

same time, it also restricts the range of values of the measure to those between 0 and 1. Some of them are the *phi*, the *coefficient of contingency* and the *Cramer's V*. These are also considered to be among the most useful, apart from several others mentioned earlier in table 9.1.

The PRE measures are essentially ratios of a measure of error in predicting the values of one variable (based on knowledge of that variable alone) and the same measure of error applied to predictions, based on knowledge of an additional variable⁵. Some of the measures are the *Goodman and Kruskal's lambda*, *Goodman and Kruskal's tau*, *Gamma* and *Somer's d*. Among these, *Gamma* is considered to be the most commonly used.

9.2.3.2 Measures of Association for Ordinal Variables

When handling pairs of ordinal variables in a crosstabulation, *lambda* can be used as a measure of association. Besides, there are also measures that are based on concordant and discordant pairs such as *Goodman and Kruskal's Gamma*, *Kendall's tau-b*, *tau-c* and *Somer's d*. However, we could also determine the correlation coefficient of the two variables by employing the *Spearman's rank order correlation*.

When we have two ordinal level variables with a large number of categories and we wish to see if they are correlated, we have two options - either to combine categories and use the crosstabulation approach, or to use the rank order correlation. However, it has been seen that combining categories usually leads to some loss of detail and distortion of patterns, so rank order correlation has often been preferred. There are two main rank order correlation coefficients that we can choose from - *Kendall's tau* and *Spearman's rho*. Although both of them are of the normal correlation coefficients, they

⁵For further discussion, see Norusis (1990b : p.133) and, Milliken and Johnson (1984).

differ in their methods of handling tied ranks (that is, when two or more people are on the same rank of a variable). Kendall's tau is more appropriate when there are likely to be a lot of tied ranks, while Spearman's rho is preferred when the ratio of cases to categories is smaller. Obviously the formulae for the two measures differ, but the areas of divergence need not concern us here⁶.

The interpretation of the results of either of these methods is identical to *Pearson's r*, in that the computed coefficient will vary between -1 and +1. The sign of the coefficient indicates the nature of the relationship, while the absolute value of the coefficient expresses the extent of the relationship. Thus, both methods provide information on the strength and direction of relationships. Moreover, unlike Pearson's *r* (which requires interval variables), rho and tau are non-parametric methods, which means they can be used in a wide variety of contexts since they make fewer assumptions about variables. The null-hypothesis that can be tested is that, the two variables are uncorrelated. Rejection of this hypothesis results in the conclusion that there exist a relationship between the two variables.

9.3 Exploring Differences between Two Unrelated Samples

The objective of this part is to discuss the results obtained from the measures of association as well as exploring the possibility of observing any significant differences in the responses gathered between two unrelated groups of respondents. From the total set of 575 respondents, 383 (67%) came from the capital city of Kuala Lumpur while the remaining 192 (33%) were obtained from several other large cities and towns of West Malaysia. *The rationale for conducting this exercise was to test the possibility that the nature of responses gathered from the questionnaire differ significantly between the*

⁶For further explanations, see De Vaus (1993).

two groups of respondents. The reason was based on the assumptions that, since those from Kuala Lumpur : (i) were presumably earning more than the respondents from other towns; (ii) were more directly exposed to and influenced by the capital-city life; and (iii) were within closer and easier reach of immediate public and privately held business information of the market, their attitude and business outlook might be different from those living elsewhere.

In conducting the test, we defined our hypothesis as follows :

- (i) The *null-hypothesis*, H_0 : the Kuala Lumpur and non-Kuala Lumpur respondents did not differ in their responses to each of the questions posed, that is, *the responses were independent of the respondents' domicile.*
- (ii) The *alternative hypothesis*, H_1 : the Kuala Lumpur and non-Kuala Lumpur respondents did differ in their responses, that is, *the responses were not independent of the respondents' domicile.*
- (iii) The *level of significance* used as the basis for rejecting the null-hypothesis was at the 1% level or 0.01. (This is to ensure the stringency of the test, relative to the more common choice of 5% or 0.05 level).

Rejecting the null-hypothesis, H_0 , implies that "it appeared unlikely that the Kuala Lumpur and non-Kuala Lumpur respondents have responded in the same way", that is, *it did appear that the responses given were dependent on where they lived.*

Alternatively, not rejecting the null-hypothesis, implies that "there was no reason to believe that the Kuala Lumpur and non-Kuala Lumpur respondents have responded in different ways", that is, *it did not appear that the responses given were dependent on where they lived.* In short, the responses were independent of the geographical locations.

The variable describing the two geographical regions was a nominal variable and has been used as the independent variable against the 72 dependent variables from the questionnaire set. In testing the significance of the relationships and measures of association, we have employed the *Pearson's chi-square test*, *phi*, *Cramer's V* and the *contingency coefficients*. Whenever the dependent variable was ordinal, the non-parametric Mann-Whitney test was also used.

The chi-square statistic is a measure that is based on a comparison of observed frequencies (denoted by O) with expected frequencies (denoted by E) in each of the crosstabulation cells. The formula is given by, $\chi^2 = \sum \sum (O_{ij} - E_{ij})^2 / E_{ij}$.

The calculated chi-square is then compared to the critical points of the theoretical chi-square distribution to produce an estimate of how likely (or unlikely) this calculated value is to appear, if the two variables were in fact independent. From the chi-square statistic and the degrees of freedom⁷ in a crosstabulation, the observed significance level was then calculated. However, with SPSS V, all these would have automatically been computed.

In analysing, we looked at the Pearson chi-square value and its associated significance level (usually printed below the computer print-out table). If the level of significance is smaller than 0.01, we would reject the null-hypothesis that the two variables were independent. Then we looked at the three chi-square-based measures to see how strongly the dependent and the independent variables were related.

⁷ Essentially, the term degrees of freedom refers to the number of components that are free to vary in a random sample. It is a difficult concept which is well explained elsewhere (see Walker : 1940). In a crosstabulation, it refers to the number of cells in the table that are free to vary : $df = (r-1) (c-1)$.

9.3.1 Part One - General Background

- Q1 Do you live in an urban or rural area ?
- Q2 Is your work place in an urban or rural area ?
- Q3 Do you regard yourself as having an urban or rural upbringing ?
- Q4 Which of the following language/s do you use most often in your daily work ?
- Q5 Which of the following daily newspapers do you read (language) ?
- Q6 Do you normally listen to the daily news on television or radio ?
- Q7 Which of the following news in the media interest you most ?
- Q8 Can you name a few magazines that you read regularly ?

Results : For the first five questions, based on the respective degrees of freedom, at 1% level of significance, the chi-square values were relatively large in comparison to the critical values in the chi-square distribution table⁸. This implies that the discrepancies between the observed and the expected frequencies were large. All the observed significant levels for these five questions were very small indeed (with $p < 0.001$) and hence we rejected the null-hypothesis that the two variables were independent. For the three questions that followed, the reverse occurred, that is, the Pearson's chi-square statistics were too small to show any significant difference. Since the observed significant levels were very large, ranging from $p = 0.14$ to $p = 0.28$, there was insufficient evidence to reject the null-hypothesis.

Comments : It was not surprising to find the first three questions to be strongly dependent on the districts the respondents came from because these questions were directly related to the latter. It was also apparent that the usage of English was more prominent in the capital city than elsewhere. Nevertheless, there were no differences between the two groups in their interest towards keeping abreast with daily happenings, or in their choice of reading business-related news and reports. As we shall see later, this confirmed that such interest was not necessarily confined to places of dwelling but

⁸ At a given degrees of freedom, the larger the chi-square value, the smaller is the proportion of area under the chi-square probability distribution curve, i.e. the smaller is the p-value. Also note that the expected values are what we would expect if the two variables are independent. If the variables are independent, then the observed and expected frequencies should be close to each other, and the value of the chi-square statistic should be small.

was more closely related to the nature of the respondents' professions and their educational background.

9.3.2 Part Two - Your Opinion of Policies for Muslims in Malaysia

Q9 In general how satisfied are you with the overall economic achievements of the Muslims in our country today ?

Q10 Do you believe that it is important for a larger number of Muslims to get involved in the business world today (directly/indirectly) ?

Q11 Do you understand the basic objectives of the National Development Policy (NDP) that replaces the former New Economic Policy (NEP) ?

Q12 Do you understand the government vision of 2020 (especially its economic policies)?

Q13 Do you understand the government's objectives of introducing the unit trust ASN/ASB schemes ?

Q14 Are you aware of the government's efforts/policies toward increasing and distributing the wealth of the nation to the Muslims?

Results : For each of the six questions above, at the 1% level of significance, the null-hypothesis that the responses were independent of the respondents' locations could not be rejected. This was because the probability of seeing the differences (between the observed and the expected frequencies for all the variables) by chance, was too large to consider rejecting the null-hypothesis. The probability values or p level for all the test statistics used, ranged from $p = 0.42$ to $p = 0.97$. The Pearson chi-square, the phi and Cramer's V statistics all showed the same values. Further, since the variables were ordinal, we also used the Mann-Whitney test to check, and the results were consistent with the former. In short, since there were no significant differences found between the obtained and the hypothesised result, we would conclude that there were no differences between all the pairs of variables above.

Comments : The results indicated that the respondents' opinions on policies for the Bumiputera Muslims in Malaysia seemed to show strong independence of their geographical locations. This implies general consensus and consistencies in their

perceptions of the matters at hand. In the previous chapter, we noticed the trend of answers given to these questions in which a significant percentage of them showed dissatisfaction with the economic achievements of the Bumiputera Muslims, and felt more should get involved in the business world. At the same time, regardless of whether they were from Kuala Lumpur or not, most of them seemed to have only a basic and general understanding of the policies being discussed.

9.3.3 Part Three - Your Opinion of the Government's Economic Policies

Q15 In general how satisfied are you with the government's economic policies with respect to the Muslims ?

Q16 How satisfied are you with the government's policies on the ASN/ASB schemes ?

Q17 How satisfied are you with the government's efforts toward encouraging Muslims investment in the stock market ?

Q18 Do you agree that the ASN/ASB schemes have mostly benefited those whom you regard as already rich ?

Q19 Do you agree that the economic gap (wealth) within the Muslim community (intra-community) has widened during the last ten years or so ?

Q20 Do you agree that the Government needs to revise certain policies in order to narrow the differences in the wealth distribution among the Muslims ?

Q21 Do you agree that the government should introduce forced-investment among the Muslims (such as increasing their EPF contributions) in order to increase their investment-participation in the market ?

Results : The results in this part were similar to the previous in that there was insufficient evidence to reject the null-hypothesis of no difference, that is, the responses given to the questions above were independent of where the respondents came from. Here again, the observed significance level or the p values for all the test statistics were very large ranging from 0.11 to 0.96, implying that all the chi-square values were below that necessary for achieving our target of 0.01 level of significance. The Mann-Whitney test also gave the same results with one exception - the two tailed p value for question 18 was 0.6 while the chi-square and all the chi-square based measures showed an observed significance level of about 0.02. This was regarded as marginally larger than 0.01, and the null-hypothesis would have been rejected had the significance level used

been $p < 0.03$. Hence, we accepted the null-hypothesis of no difference between the two groups in question 18 at 3% level of significance.

Comments : Here again the tests seemed to indicate there was no reason to believe the presence of any significant difference in the responses given from those living in Kuala Lumpur vis-à-vis those from the other cities. However, in question 18, if we were to consider the two variables as being nominal, then the result from the chi-square test would have shown there was indeed a significant difference at $p < 0.05$.

The question enquired about the Government's unit trust schemes which (as we have seen earlier) have been more capitalised by those from the higher income brackets. Thus, it was in fact not surprising to see a larger number of Kuala Lumpur respondents disagreeing with the statement than those from other cities. However, this argument was simply a conjecture because the variable was indeed ordinal. In order to be objective, the Mann-Whitney test result must also be taken into consideration.

9.3.4 Part Four - Your Opinion of Investments and the Stock Market in Malaysia

Q22 The stock market is one of the most important means for a society to mobilise their resources and improve their economic well-being.

Q23 Not many Muslims really understand or appreciate the functions and working mechanisms of the stock market.

Q24 The Government has not done enough to encourage Muslims toward direct participation and investment in the stock market.

Q25 Religious reasons prevent a large number of Muslims from participating in the stock market.

Q26 Muslims who participate in the stock market are more interested in the short-term capital-gain than long-term equity participation.

Q27 The stock market is more a place for speculative short-term investments.

Q28 It is better and less risky to invest in assets like houses, land or other business activities than the stock market.

Q29 A large percentage of Muslims who have not participated in the ASN/ASB schemes believe that the schemes indulge in illegitimate (haram) activities.

Q30 If there existed an Islamic-based stock market, a large number of Muslims would participate in its trading and holding of shares.

Q31 What is your opinion of the existing stock market ?

Results : Apart from question 29 which gave a conflicting signal between the Mann-Whitney test and the Pearson's chi-square statistic, the observed significance level for all the remaining questions showed very high probability or p values, ranging from $p = 0.14$ to $p = 0.87$. Since all the observed significance levels were greater than 0.01, it appeared unlikely that the dependent and independent variables were related.

The observed significance level tells us the probability that the observed difference could be due to chance. It is the probability that the sample tested could show a difference at least as large as the one observed, if the two variables were really independent. Since the probability of obtaining these results by chance was too high, we could not reject the null-hypothesis of independence.

In question 29, which was an ordinal variable, the two tailed p-value of the Mann Whitney test showed $p = 0.006$, that is, p being less than 0.01. On the other hand, the Pearson chi-square observed significance level showed $p = 0.049$, which was much larger than 0.01. Though still marginally smaller than p value of 0.05, most authors⁹ recommended the usage of the former test (that is, the Mann Whitney test) in exploring differences whenever the data are ordinal or from a markedly non-normal distribution. Hence, we would reject the null-hypothesis of independence in the manner the two sample groups responded to question 29.

Comments : As described in the previous chapter, the objective of posing the questions in part four above was to gauge the religious attitudes and perceptions of the Bumiputera Muslim respondents on issues related to the stock market, set against their professions and educational backgrounds. It was also meant to draw information on

⁹ See Bryman (1990) and Norusis (1990b).

their risk-return complexion with regard to stock market investment as well as their understanding of the working mechanism of the capital market itself.

The results above showed that, despite our initial expectation of seeing some differences in response to the questions above, especially those related to Islamic values, these did not happen. There also seemed to be a consensus of opinion in response to the query on the Islamic position of the stock market. A large majority indicated either the participation was unacceptable altogether or the participation would only be acceptable on Islamically legitimate counters, or that they were uncertain of the Islamic *Shari'ah* rulings on the transaction in the first place.

The only significant difference was found in question 29 regarding their opinions on the unit trusts schemes of the ASN/ASB. Many from Kuala Lumpur seemed to disagree with the suggestion that those who have not invested must have regarded the schemes to be Islamically unacceptable. To many of them, the main reason for those who did not participate in the ASN/ASB schemes was probably because of the latter's lack of financial resources or simply having other priorities or preferences for alternative investments.

9.3.5 Part Five - Your Savings Background

Q32 Do you keep any savings ?

Q33 How would you regard your savings pattern to be ?

Q34 Why do you save ?

Q35 On the average, what percentage of your total income do you save each time ?

Q36 What is the total value of all your savings (excluding investments) as of (date) ?

Q37 Which of the following institutions do you have your savings in ?

Q38 Do you regard rate of return on your savings as an important criteria in your choice of institutions in which you save ?

Q39 If you do have an account in a bank, which type of account/s do you keep ?

Q40 If you do have an account with the Islamic bank, which of the followings made you choose the bank ?

Q41 What is your opinion of Bank Islam Malaysia ?

Results : There were ten questions posed in this part and from these, three questions (numbers 32, 37 and 39) were found to have relatively large chi-square values with corresponding small observed significance levels (or p values of less than 0.01). It therefore appeared unlikely that the responses given to these questions were independent of the geographical locations. The remaining seven questions did not show sufficient evidence for us to reject the null-hypothesis of no difference.

Comments : This part attempted to draw information about the respondents' savings background. In question 32, we began by inquiring whether the respondents kept any savings and found that more than 95% responded affirmatively. However, there appeared to be a relatively lower proportion of savers from Kuala Lumpur than expected. The chi-square value was large and that allowed us to reject the null-hypothesis of no difference. A plausible reason for seeing the difference was presumably the higher consumption pattern for the Kuala Lumpur residents, relative to the others.

The remaining two questions that showed small p values (questions 37 and 39), were in fact closely related. While the former inquired about the financial institutions the savers had chosen, the latter identified the types of account they kept. These two questions were also used to verify one another. For example, it might not be possible for one to claim to have saved in the Bank Islam Malaysia but yet to response (in the following question) not to have any form of accounts in the bank at all. The fact that both these variables have common p-values indicated consistency in the responses gathered.

Apart from rejecting the null-hypothesis for the two variables above, the crosstabulations also indicated that the Islamic-based institutions such as the Bank Islam Malaysia, the Islamic insurance and others seemed to be more popular among the non-Kuala Lumpur respondents. However, this finding alone did not provide sufficient evidence for us to conclude that we were observing significant differences in the Islamic

inclination between the two groups. This was because the results obtained from a larger part of the questionnaire did not seem to support such findings. In any case, there could be a host of reasons which might explain such differences in the choice of institutions. For example, due to the presence of a large number of banks in the Kuala Lumpur city relative to other areas, it could be possible that the respondents choice of banks was more for their services and convenience purposes rather than for any religious reasons.

Note : Some of the questions put forth in this part, were of the multiple responses types. They offered the respondents the choice of selecting more than one answer. This has indeed posed some problems when crosstabulating them against other variables because each set of the multiple answers would then appear as if it was an independent variable on its own. One way of overcoming this problem was to collapse the multiple-variable questions into a single variable and then re-code the choice of answers into sets of multiple combinations. However, unless done with extreme care, this method posed the potential of losing some information in the process of re-coding them.

9.3.6 Part Six - Your Investments Background

Q42 Which is more important to you, savings or investments ?

Q43 Do you hold any form of investment ?

Q44 Which of the following forms of investment do you hold ?

Q45 Of all the investments you hold, which of the following would you regard as most important to you ?

Q46 How knowledgeable and well-informed are you in the investment that you have regarded as most important in Q45 ?

Q47 On average, what percentage of your total annual income do you invest in a year?

Q48 What is the total value of all your investments (excluding savings but including houses, land, etc.) to date ?

Q49 Do you have any investment in the stock market ? (This includes shares of ASN/ASB).

Q50 Why don't you invest in the stock market ?

Q51 Of all the investments you hold what percentage lies in stocks and shares (including ASN/ASB shares) ?

Q52 How knowledgeable and well-informed are you of the stock market investments ?

Q53 Which of the following describe you best as an investor ?

Q54 Which of the following counters in the KLSE attract you most ?

- Q55 Do you hold any shares of the Islamic bank ?
Q56 What is the average market value of all your shares (including ASN/ASB shares)
Q57 Do you have any investment in the ASN/ASB ?
Q58 Why do you invest in the ASN/ASB ?
Q59 Why don't you invest in the ASN/ASB ?

Results : There were two questions from this part (questions 45 and 48) that showed very small observed significance levels, having p values of less than 0.001. Since the probability of seeing such differences in the sample by chance was too small, we rejected the null-hypothesis of independence in these two variables. As in the previous part, the remaining questions did not provide sufficient evidence for us to reject the hypothesis of no difference. In short, there were no differences in the responses given to the other questions between the two groups of respondents.

Comments : It was surprising to note there were not many rejections of the null-hypothesis in this section since our initial expectations were to observe several significant differences in investment background from the respondents of Kuala Lumpur and the other cities. As we shall see in the following part, the income distribution of respondents from Kuala Lumpur was in fact much higher than those from the other towns. This led us to believe there could be differences in the form of investments they held, the percentage of income invested and their level of investments in the stock market relative to those from other towns. However, the results did not support such expectations.

The only differences found in this part were : firstly, with regard to the type of investment they regarded as most important; and secondly, to the total value of their investments. The results indicated that the respondents from Kuala Lumpur seemed to have higher preference for investment in houses relative to the other investment alternatives including land, stocks and shares. Since the cost of houses in Kuala Lumpur were relatively more expensive than in most other towns, it was only natural to find the

total value of their investments in question 48 to be much higher than the other group of respondents; hence the rejection of the null-hypothesis.

9.3.7 Part Seven - About Yourself

Q60 Religion ?

Q61 Race ?

Q62 Sex ?

Q63 Age ?

Q64 Marital status ?

Q65 Number of dependants ?

Q66 Educational background ?

Q67 Occupation ? Which sector ?

Q68 Number of years working ?

Q69 What is your average monthly income ?

Q70 Is your spouse working ?

Q71 If yes, what is your spouse's average monthly income ?

Results : This was the final part of the questionnaire and it sought demographic information from the respondents. As such, for some of the variables, it was not relevant to test for their significant differences between the two groups. For example, the variables religion, race, sex, age, marital status and number of years working, were regarded as irrelevant to the objective of exploring differences between the two groups of respondents. However, the tests on the remaining variables such as income, occupations, number of dependants, spouse at work and their income levels, showed the expected results of significant differences.

Since the data for these questions were considered to be ordinal, we employed the Mann-Whitney test to supplement our findings with the chi-square and chi-square based measures. All the tests indicated similar p values of less than 0.01; thus, the null-hypothesis of independence between the respondents' responses and the locations they came from, was rejected at the 1% level of significance.

Comments : All the variables that showed significant differences between the dependent and independent variables were consistent with our initial expectation. The results indicated that the respondents from Kuala Lumpur : (i) had received relatively higher income; (ii) had more working spouses; (iii) had fewer dependants; and (iv) had more number of professionals and businessmen than other places. Nevertheless, the education background did not indicate any significant difference.

9.3.8 Summary of Tests

In summary, apart from some of those variables which at the outset were expected to show differences, most of the remaining variables seemed to indicate independence between the respondents' responses and respondents' geographical locations. It is also important to note that finding a difference that is statistically significant does not necessarily imply that it is of any practical importance because for sufficiently large sample sizes (such as in the data set examined), even a small difference would prove to be statistically significant. On the other hand, for small sample sizes even a large difference may not appear to be statistically significant. Thus, it is important to look at the actual percentage in the statistical table to determine whether the observed significance levels are of any practical importance or otherwise. *Finally, the conclusion that can be drawn from this exercise is that, in general, there was no reason to believe that the pattern of response from the subjects under study differed significantly between those from Kuala Lumpur and the other towns and cities.*

9.4 Exploring Relationships between Two Variables

While the previous part explored differences between two unrelated samples, analysing the distribution of cases in which respondents differed with respect to a variable, this part attempts to focus on the relationships between pairs of variables. Two variables are by definition independent if the probability that a case falls into a given

cell (of a contingency or crosstabulation table) is simply the product of the marginal probabilities of the two categories defining the cell. On the other hand, two variables are considered related when the distribution of values for one variable is associated with the distribution exhibited by the other variable.

The investigation of relationships is an important step in explaining, and consequently contributing to the building of theories about the nature of the phenomena we are studying. There are, in fact, several ways available to carry out this investigation. Although the examination of the various row and column percentages in a crosstabulation may prove to be a useful initial step in studying the relationship of two variables, these do not allow for quantification or testing of that relationship. For these purposes, as in the previous occasion, it is useful to consider various indices that measure the extent of association, as well as statistical tests of the hypothesis that there is no association.

Earlier in table 9.1, we presented the guidelines for selecting measures of association as recommended by De Vaus (1993). In exploring relationships, some authors (such as Bryman : 1990 and Norusis : 1990b) differed in their opinions over the choice of tests to be used, for reasons beyond the scope of our discussion here. We shall, however, indicate in the following table 9.2, the statistical tests that have been selected in testing bivariate relationships, irrespective of the variable sizes.

Table 9.2
Methods of Examining Bivariate Relationships

Levels of measurement	Test of statistical significance	Test for strength of association
Nominal and Nominal	Chi-square	Cramer's V & Phi
Nominal and Ordinal	Chi-square, Mann-Whitney & Kruskal-Wallis	Cramer's V & Phi
Ordinal and Ordinal	Rho's significance, Mann-Whitney & Kruskal-Wallis	Spearman's rho

As mentioned in chapter seven, this study was initially driven by a hypothetical theory that, among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market include issues of their (i) lack of investible financial resources, (ii) preference for investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) the impression that investing in stocks was equivalent to gambling and hence, not permissible in Islam.

We then constructed a hypothesis and formulated the following model to test each of the factors above to determine the validity of the abstract theory :

$$Y_i \equiv \text{fn} (\alpha + \sum \beta_n X_n + e), \text{ where } i = 1 \text{ to } 2; n = 1 \text{ to } 6; \text{ and}$$

Y_i = respondent's level of investment/involvement in the stock market,
represented by

Y_1 = respondent's percentage of total investment in stocks and shares, and

Y_2 = respondent's average market value of all their shares.

The independent variables X_1 to X_6 refer to the followings :

X_1 = gross household income;

X_2 = consumption and savings attitude;

X_3 = investment's attitude;

X_4 = educational background/knowledge of the stock market;

X_5 = level of risk preference/averse (that is, risk attitude);

X_6 = level of religious convictions/conscience; and

α = some constant value;

β_n = the respective coefficient of the independent variables X_1 to X_6 ;

e = some unexplained phenomena that have direct influence on the investors interest in risky assets.

In general, the regression technique would usually be employed in analysing such a multivariate empirical model. However, in this case, the nature of variables

involved did not permit us to do so. Parametric regression analysis would require the variables to be at the interval level of measurement, and thus it would be meaningless to conduct regression analysis if the variables involved were only nominal and ordinal. Hence, we employed the non-parametric tests outlined in table 9.2 as an alternative. However this method has the constraint of limiting itself to simple bivariate analysis such that, it cannot afford to analyse complex multivariate analysis as found in a regression analysis. Nevertheless, we shall explore the possibility of using more sophisticated techniques such as the hierarchical loglinear analysis and factor analysis to address these issues in the next chapter¹⁰.

In the following sub-sections, we have identified two sets of variables for the tests. The first set comprised all the relevant variables that closely represented each of the factors in the model, while the second set involved other variables (not included in the model) which were expected to shed further light on the phenomena under study. The dependent variable was then tested or crosstabulated against each of the identified factors, taken as independent variables.

9.4.1 Variables Within the Model

The dependent factor, Y, referred to the respondents participation and their level of involvement in the capital market, measured either by the volume of equities they held in the Kuala Lumpur Stock Exchange or by the amount of investment they held in the Government's unit trusts schemes of the ASN/ASB. (Recall that the unit trusts of ASN is listed on the KLSE). Both of these unit trusts schemes were among the investment instruments that were introduced exclusively to encourage the participation of the indigenous Bumiputeras (a large percentage of whom are Malay Muslims), in the

¹⁰ For an extensive discussion of various more sophisticated multivariate procedures that could be used for the analysis of qualitative data, see Feinberg (1977), Everitt (1977) and Haberman (1978).

capital market. Two variables have been identified to represent Y : firstly, the variable (ASNPRCN) that recorded the respondent's percentage of total investment in stocks and shares; and secondly, the variable (SHREVAL) that recorded the average market value of all their shares¹¹.

We then defined our hypothesis as follows :

- (i) The *null-hypothesis*, H_0 : the level of Bumiputera Muslims involvement and participation in the stock market of Malaysia *was independent* of their household income, savings and investment attitudes, educational background, knowledge or appreciation of the stock market, attitude towards risk, and Islamic conscience and conviction.
- (ii) The *alternative hypothesis*, H_1 : the level of Bumiputera Muslims involvement and participation in the stock market of Malaysia *was not independent* of the above factors.
- (iii) The *level of significance* used as the basis for rejecting the null-hypothesis was at the 1% level or 0.01.

Rejecting the null-hypothesis, H_0 , implies that "it appeared unlikely that the Bumiputera Muslims involvement in the stock market of Malaysia (as represented by their percentage of investment in shares and/or their total market value) was independent of the six factors indicated above". In short, *they were related*. On the other hand, not rejecting the null-hypothesis implies "there was no reason to believe that the community's level of stock market investment was significantly related to the set of independent variables or factors outlined". In other words, *they were not related*.

¹¹ For convenience of cross-referencing the variable labels against the questions posed, refer Appendix D.

9.4.1.1 The independent factor, X_1 (household income).

The factor was represented by two variables, the monthly income (MTHINC) and the spouse's income (SPOSINC). The relationships tested were :

- (i) ASNPRCN BY MTHINC and BY SPOSINC;
- (ii) SHREVAL BY MTHINC and BY SPOSINC.

Since all the variables involved were ordinal, it allowed us to use the non-parametric Spearman's rank order correlation to test the extent of any relationship. Besides, we also employed another non-parametric test, the Kruskal-Wallis to verify further the earlier findings¹².

Results :

Table 9.3
Results of Spearman's Correlation Coefficients

VARIABLE	MTHINC	SPOSINC
ASNPRCN	0.1114 N(427) Sig 0.021	0.2196 N(295) Sig 0.000*
SHREVAL	0.4044 N(422) Sig 0.000*	0.3060 N(294) Sig 0.000*

Note : The figures in each cell of the table (and all other correlation coefficients tables that follow), refer to the correlation coefficient, the number of cases (N), and the 2-tailed significance value, denoted by (Sig). All tests that resulted in rejecting the null-hypothesis have been marked with the asterisk sign (*).

¹² In fact, in all the tests conducted in the study, more than one statistical measures were employed so as to be assured of the accuracy of the results. Unless otherwise mentioned, the results displayed were consistent in all the statistical measures used.

Table 9.4
Results of Kruskal-Wallis test between ASNPRCN and SPOSINC

Kruskal-Wallis 1-Way Anova					
ASNPRCN : % of investments in ASN-ASB					
by SPOSINC : Spouse average monthly income					
Mean Rank	Cases				
115.68	45	SPOSINC = 1	\$1000		
145.42	162	SPOSINC = 2	\$1000 - \$3000		
156.78	58	SPOSINC = 3	\$3000 - \$6000		
205.07	15	SPOSINC = 4	\$6000 - \$9000		
136.93	7	SPOSINC = 5	\$9000 - \$12,000		
283.50	2	SPOSINC = 6	\$12,000 - \$15,000		
200.33	6	SPOSINC = 7	\$15,000		
	295	Total			
Corrected for ties					
Chi-Square	D.F.	Significance	Chi-Square	D.F.	Significance
21.3600	6	0.0016	22.4356	6	0.0010*

Table 9.5
Results of Kruskal-Wallis tests
(corrected for ties with six degrees of freedom)

VARIABLE		MTHINC	SPOSINC
ASNPRCN	χ^2	12.7128(6)	22.4356(6)
	p	0.0478	0.0010*
SHREVAL	χ^2	70.9601(6)	33.4330(6)
	p	0.0000*	0.0000*

Note : This is a summary of four separate tests on the variables, one of which is shown in table 9.4 as an illustration. The figures in each cell of the table (and all other Kruskal-Wallis, Mann-Whitney or chi-square tests tables that follow) refer to the chi-square value (χ^2), the degrees of freedom appearing within parenthesis, and the observed significance level or the p-value, respectively. Here again, all tests that resulted in rejecting the null-hypothesis have been marked with the asterisk sign (*).

Comments : This was a simple and direct analysis between the dependent variables and the two independent variables, personal and spouse's income. Both the tests using Spearman's correlation coefficients and Kruskal-Wallis showed the same results in determining whether to reject the hypothesis or otherwise. Apart from the insignificant

result between the variables ASNPRCN and MTHINC, all the others showed very high statistical significance with $p < 0.01$. This implies that the associations were very likely to hold in the population from which the sample was drawn. However, none of the correlations reported in table 9.3 showed any significant strength of relationship. The highest association recorded was a moderate positive correlation of 0.40 between SHREVAL and MTHINC. A crosstabulation on the two variables reaffirmed our findings. This was to be expected if we assume that a person's level of investment to be generally closely related to his income.

Nevertheless, when we tested to see whether there existed any relationship between the respondents' income levels and those who claimed to have investments, the results did not allow us to reject the null-hypothesis of independence - that is, they were not related. This means that (from the sample observed) a respondent's income level did not determine whether or not he held any investment.

One possible explanation for this could be that we have regarded the holdings of shares in the Government's unit trusts of the ASN/ASB as being inclusive of having investment in the stock market. These unit trust schemes were sold at par value of only RM1.00 (£0.25) per unit and hence must have been affordable to all the respondents. Further, the units could be bought in any quantity with an initial investment requirement of a mere RM10.00 (£2.50) from the investor - thus, explaining the finding of an independent relationship between the variables "monthly income level" and "having investment in the stock market".

9.4.1.2 The independent factor, X_2 (consumption and savings attitudes).

The factor "savings attitude" was represented by two variables : the percentage of gross monthly income the respondent save each time (SVPRCN), and the total value of all his savings (SVTOTAL), at the time of the survey. It was more difficult to extract

direct responses on the "consumption questions" for many felt they were rather personal. However, based on the pilot test conducted earlier, we decided to make use of "proxy variables" to represent some typical costs of lifestyles in the country, compiled by other agencies¹³. Thus we chose the variables age (AGE), marital status (MARITAL), number of dependants (DEPENDNT) and number of years working (YRSWRK). The rationale was, as one gets older, and presumably married, with higher income and with longer years in service, the nature of expenditures would tend to shift towards being more conservative and the tendency to invest tends to get higher. The idea is to determine whether their participation in the stock market is in any way related to these variables. The relationships tested were :

ASNPRCN and SHREVAL BY

SVPRCN, SVTOTAL, AGE, DEPNDNT, YRSWRK and MARITAL (all using the Spearman's correlation coefficients except for the variable MARITAL which uses the Kruskal-Wallis and chi-square tests).

Apart from MARITAL which is a nominal variable, all the others are ordinal, allowing us to use the non-parametric Spearman's rank order correlation to test for the null-hypothesis. Whenever the variables were ordinal/nominal, we made use of both the Kruskal-Wallis and the chi-square statistics to test for their significance.

Results :

Table 9.6
Results of Spearman's Correlation Coefficients

VARIABLE	SVPRCN	SVTOTAL	AGE	DEPNDNT	YRSWRK
ASNPRCN	0.2007 N(407) Sig 0.000*	0.2539 N(407) Sig 0.000*	0.0459 N(427) Sig 0.344	0.0128 N(406) Sig 0.798	0.0298 N(425) Sig 0.540
SHREVAL	0.2716 N(401) Sig 0.000*	0.5765 N(403) Sig 0.000*	0.2844 N(422) Sig 0.000*	0.0901 N(401) Sig 0.071	0.2549 N(421) Sig 0.000*

¹³ Several reports of Survey Research of Malaysia and publications of Far Eastern Economic Reviews.

Table 9.7
Results of Kruskal-Wallis tests
(corrected for ties with two degrees of freedom)

VARIABLE		MARITAL
ASNPRCN	χ^2	1.6363(2)
	p	0.4412
SHREVAL	χ^2	19.2122(2)
	p	0.0001*

Comments : The objective of this section was to draw inferences about the relationship between the respondents' level of involvement in holding shares against the probable level of monthly household disposable income. As seen, the latter was measured through savings and other financial commitments such as the number of dependants, marital status, age and length of years working. All these factors should be seen in the light of the previous section where we analysed their relationships against income.

The summarised output in tables 9.6 and 9.7 showed mixed results. Firstly, we noticed several pairs of variables which were statistically significant with p values less than 0.01, thus permitting us to reject the null-hypothesis of independence. However, it is always important to look at both the correlation coefficients and test of significance to avoid misinterpreting the results. For example, there was a marked difference when we compared the strong correlation coefficient of 0.58 between the variables SHREVAL and SVTOTAL and the weak correlation of 0.20 between the variables ASNPRCN and SVPRCN. While both associations were very likely to hold in the population under study, the strength of the former pair was more apparent.

Among the six variables tested against the share values (SHREVAL), all but one variable (DEPNDNT) showed very small observed significance levels. This implies the high probability of seeing such relationships occurring in the population. On the other hand, the test rejected the null-hypothesis for only two variables, SVPRCN and SVTOTAL, when tested against ASNPRCN. Nevertheless, many of the relationships

ranged between the weak and moderate levels. It was also surprising to see conflicting results for the two variables "marital status" and "number of dependants" when they were tested against both ASNPRCN and SHREVAL. Our expectations were that these two variables would affect the respondents' disposable capital, and hence their share values; however, the results did not indicate this.

In summary, from the results obtained in tables 9.6 and 9.7 above, we can safely conclude that, it was very likely for the total market value of shares held by the Bumiputera Muslims community in Malaysia to be dependent upon their savings characteristic, total savings value, age, marital status and number of years working. However, in terms of the percentage of their total investment in these shares, only the savings variables ("percentage of savings from income" and "total savings") showed significant associations. The reason for the differences was clear. While the respondent's level of participation in holding shares (as depicted by ASNPRCN) seemed to be independent of the factors mentioned (apart from savings), the amount of money put aside for investment in shares was apparently significantly related to the factors under consideration¹⁴. We then cross-checked the results by crosstabulating the types of investments held against the six independent variables above, and the outcome confirmed our expectation of seeing large apportioning of investments in houses and land, relative to stocks and shares.

9.4.1.3 The independent factor, X_3 (investment's attitude).

We identified five different variables that were felt to closely represent the respondents' investment characteristics and attitudes. They included : (i) the ordinal

¹⁴It is important to note that the variable ASNPRCN measures the respondent's percentage of total investment that has been invested in stocks and shares, while SHREVAL measures the total market value of his shares at the time the survey was conducted. Although the latter might have appreciated/depreciated over time due to market price fluctuation, it was thought to be the best proxy for gauging the amount of money the respondent would have invested.

variable (INVSPRCN) that measured the percentage of total annual income invested annually; (ii) the total market value of all investments held, (INVSTOTL), which had excluded savings but included investment in houses, land, etc.; and (iii) the remaining three were all nominal variables, namely, INVSTYP that referred to the type of investments held; the IMPTINVS which identified the investment regarded as most important; and finally, the variable INVSCHR which described the investors' investment characteristics such as being speculators, short-term or long-term investors. The associations tested were : ASNPRCN and SHREVAL BY

INVSPRCN and INVSTOTL (using the Spearman's correlation coefficients);

INVSTYP, IMPTINVS and INVSCHR (using the Kruskal-Wallis and chi-square tests).

Results :

Table 9.8
Results of Spearman's Correlation Coefficients

VARIABLE	INVSPRCN	INVSTOTL
ASNPRCN	0.2645 N(420) Sig 0.000*	0.1048 N(421) Sig 0.032
SHREVAL	0.3053 N(416) Sig 0.000*	0.4467 N(416) Sig 0.000*

Table 9.9
Results of Kruskal-Wallis tests
(corrected for ties with respective degrees of freedom in parenthesis)

VARIABLE	INVSTYP	IMPTINVS	INVSCHR
ASNPRCN χ^2	21.4454(4)	31.5766(6)	15.3877(5)
p	0.0003*	0.0000*	0.0088*
SHREVAL χ^2	17.0012(4)	16.0318(6)	19.2587(5)
p	0.0019*	0.0136	0.0017*

Comments : The objectives of conducting these tests were two fold : firstly, we wanted to determine the extent to which the respondents had placed emphasis on investing in

the stock market, relative to other forms of investments; and secondly, to determine how their style and choice of important investments had influenced the level of their participation in the stock market.

Our initial expectation was that, all the tests would tend to reject the null-hypothesis of independence. This was because each pair of variables identified were thought to be naturally dependent on each other. However, from the summarised results in tables 9.8 and 9.9, it was apparent that not all the tests produced statistically significant results to allow such rejections.

In table 9.8, the total share values (SHREVAL) and percentage of investments that had been invested in shares (ASNPRCN) were moderately correlated with the percentage of annual income set aside for investments. As expected, the p values were very small, and thus the null-hypotheses of independence for the two variables were rejected. However, the variable which measured the total value of investments (INVSTOTL), gave conflicting results. While it was statistically significant against SHREVAL, we could not reject the null-hypothesis against ASNPRCN. This simply indicated that, while the respondents' share values were directly related to the total value of their investments, a change in the size of the latter did not necessarily imply a proportionate change in the percentage of investment being invested in shares. In fact, a sizeable percentage could have been invested in other forms elsewhere.

This reasoning was verified when we reviewed the frequency distributions and crosstabulated the variable "total investments" against the "investments held in shares". The median for the distributions was the cell with the values RM100,000 - RM200,000 and RM10,000 - RM20,000, respectively. Thus, it was obvious that investments in shares were given less importance relative to the purchase of other assets such as houses or land. This must have also explained the reason for having a small p-value in the test of independence between the two variables SHREVAL and IMPTINVS. Although the

value $p = 0.0136$ did not allow us to reject the null-hypothesis of independence, the result did indicate some form of dependence between them.

Further, it was also noticed that almost 80% of those who claimed to hold stock market investments indicated both houses and the unit trusts of ASN/ASB as their choice of most important investments, relative to any other risky stocks and shares floated on the market. However, in another contingency table, we found that there was an inverse relationship between the variables "size of investment in shares" and the "investment type that was regarded as most important". Here it showed that the higher the percentage of shares investment being held, the more it was regarded as important, regardless of the value of houses or land the respondents held.

When we analysed these few sets of crosstabulations together, especially when taking the proportion of annual income being invested in a year, the type of investments respondents held, and the investment that was regarded as most important, relative to the total market value of investments they had, there were several plausible reasons and important implications that could be offered to explain the situation. Firstly, it could be possible that the Bumiputera Muslims were simply extremely risk averse in their investment outlook. Secondly, the reason for seeing a high preference for the ASN/ASB unit trusts schemes (apart from their choice of investing in houses) was because the schemes in themselves were appealing and offered very attractive returns relative to their risk exposures. In other words, it could have been a good choice for them in the first place. Thirdly, it could be possible that a house was preferred to other forms of investments by virtue of it being a basic necessity and a social norm for married income earners to own one.

Nevertheless, we felt that the reason of "basic necessity or social norm" could only be acceptable in cases of first-house owners. But the question posed did not differentiate between respondents owning first-house or otherwise, so we were not able

to determine whether the latter group would still have regarded houses as being a better form of investment relative to equity-holdings. Had this been the case, it would have further supported our earlier suggestion of the respondents' choice and attitude toward investments.

9.4.1.4 The independent factor, X_4 (educational background and appreciation of the stock market).

The variable selected to represent educational background (EDUC) was more direct than to select variables that would closely reflect the respondent's appreciation of the stock market. After some consideration, the latter were represented by the variables "knowledge of stock market investments" (SMKNWL), and "appreciation of the underlying objectives of the unit trusts schemes ASN/ASB" (ASNBOBJ). Two other variables, namely, the respondent's occupation (OCCPN1) and the occupation's sector (OCCPN2) were also included to check whether there existed any differences in the level of participation in the stock market investment among those in the private sector, public sector and self-employed. The relationships tested were : ASNPRCN and SHREVAL BY

SMKNWL, ASNBOBJ and EDUC (using Spearman's correlation coefficients);
OCCPN1 and OCCPN2 (using the KRUSKAL-WALLIS and chi-square tests).

Results :

Table 9.10
Results of Spearman's Correlation Coefficients

VARIABLE	SMKNWL	ASNBOBJ	EDUC
ASNPRCN	- 0.1829 N(425) Sig 0.000*	- 0.1236 N(426) Sig 0.011*	0.0202 N(427) Sig 0.677
SHREVAL	- 0.1962 N(419) Sig 0.000*	- 0.1856 N(421) Sig 0.000*	0.1435 N(422) Sig 0.003*

Table 9.11
Results of Kruskal-Wallis tests
(corrected for ties with two degrees of freedom)

VARIABLE		OCCPN1	OCCPN2
ASNPRCN	χ^2	9.3584(2)	6.0290(2)
	p	0.0093*	0.0491
SHREVAL	χ^2	17.2167(2)	14.2548(2)
	p	0.0002*	0.0008*

Comments : This section attempted to draw inferences on the relationships between the level of investments and the perceived knowledge of the respondents toward the importance of the stock market in economic development. The latter was presumed to be reflected in their understanding of certain Government policies pertaining to the Bumiputera Muslims participation in the stock market (such as the policy of introducing the ASN/ASB unit trust schemes) as well as their education background, occupation, knowledge of the stock market, etc.

The results obtained in the two tables 9.10 and 9.11 above provided several indications. Firstly, the association test between SHREVAL and all the independent variables showed very high statistical significance with p values being less than 0.004. Thus the relationships were very likely to hold in the population from which the sample was drawn. However, like many of the previous results, the correlation coefficients showed very weak association.

Secondly, an interesting point to note was the four negative correlations between each of the dependent variables ASNPRCN, SHREVAL and SMKNWL/ASNBOBJ. Since the response to the level of knowledge (in the questionnaire) was organised in a descending manner, the results implied that, the more knowledgeable the respondent was of the stock market, the greater would his investment in shares be. Nevertheless, what seemed a little perplexing were the inconsistencies in the respondent's education background and his occupation sector. Here, the variable ASNPRCN appeared to be

independent of both of them, contrary to SHREVAL where they showed close relationships.

In summary, what was apparent from the above results was the influence of knowledge in encouraging stock market investments. The nature of occupation and the sector the respondents belong to, also determine the amount or value of shares being held. This was expected for two reasons : firstly, occupation would be strongly correlated to income which eventually affect the propensity to invest; and secondly, those respondents working in the private sector were (relatively) more likely to be exposed to many business dealings involving the stock markets, hence its influence.

9.4.1.5 The independent factor, X_5 (attitude towards risk).

There were only three variables that could be identified to suggest the respondent's level of risk preference : (i) the variable that suggested stock market as a risky place for speculative purposes (SMSPEC); (ii) the variable that suggested investing in houses or other assets as being less risky than dabbling in shares (SMRISKY); and (iii) the variable that indicated respondents' investment-types (INVSTYP). However, the latter (INVSTYP) has already been discussed in factor X_3 under the "preference of investments" where it was shown most respondents least preferred investing in shares. Thus, the latter was excluded and the relationships tested were : ASNPRCN and SHREVAL BY SMSPEC and SMRISKY (using Spearman's correlation coefficients).

Results :

Table 9.12
Results of Spearman's Correlation Coefficients

VARIABLE	SMSPEC	SMRISKY
ASNPRCN	0.0585 N(425) Sig 0.229	0.1449 N(426) Sig 0.003*
SHREVAL	0.1143 N(420) Sig 0.019	0.0951 N(421) Sig 0.051

Comments : The objective of crosstabulating the respondents' level of participation against their opinions on the riskiness of the stock market was to determine whether the latter had any influence on the former. From the results above, we noticed a mixed indication. While the total share values being held seemed to be independent of the respondents' perceived opinions on the riskiness of the stock market, the same did not take place for the variable ASNPRCN. The observed significance level was very small ($p < 0.01$) and thus we rejected the null-hypothesis of independence. This implies that the percentage of investment a respondent placed in the share market was (in some way) related to his understanding or perception of the market. However, the correlation coefficient was too weak (0.14) to offer any concrete conclusion. Besides, the p-value for the test between ASNPRCN and SMSPEC was also larger than 0.01 which indicated the absence of any significant relationship.

Further, the plausible reason for failing to reject the null-hypothesis with SHREVAL was probably the inclusion of the relatively "risk-free" investment in the Government-backed unit trust schemes (ASN/ASB), as part of the total share values held. Thus the results could have been distorted. In order to verify our earlier findings, we crosstabulated the two groups of shareholders and non-shareholders against the variable SMRISKY. The results confirmed our opinion that the respondents' perception of the stock market as a risky investment was not independent of the degree to which they were encouraged to participate in it.

9.4.1.6 The independent factor, X₆ (level of religious conscience).

This was the last factor in our hypothesis model and we had selected three variables as proxies to represent the respondent's level of religious consciousness and commitment. The idea was to check whether a respondent's religious conviction or beliefs (in relation to investment in stocks and shares) had any influence on his participation in the stock market. The first variable chosen (SMOPN) was a direct question inquiring the respondent's opinion of the existing stock market from an Islamic perspective. The other two variables were rather "camouflaged" questions seeking to identify their level of consciousness and sentiments toward Islamic alternatives. This approach was taken because of the experience of getting weak responses when more direct and "leading-questions" were employed during the pilot-test. Thus the variable SMRLGN suggested it was religious convictions that deterred many (Bumiputera) Muslims from investing in the stock market; and secondly, the variable SMISLAM inquired whether they agreed that a larger number of the (Bumiputera) Muslims would have participated in shares investment, had there been an Islamic-based stock exchange. The relationships tested were : ASNPRCN and SHREVAL BY

SMRLGN and SMISLAM (using Spearman's correlation coefficients);
SMOPN (using the Kruskal-Wallis and chi-square tests).

Results :

Table 9.13
Results of Spearman's Correlation Coefficients

VARIABLE	SMRLGN	SMISLAM
ASNPRCN	0.0756 N(424) Sig 0.120	0.0744 N(425) Sig 0.126
SHREVAL	0.0638 N(419) Sig 0.192	0.1155 N(420) Sig 0.018

Table 9.14
Results of Kruskal-Wallis tests
(corrected for ties with three degrees of freedom)

VARIABLE		SMOPN
ASNPRCN	χ^2	2.4587(3)
	p	0.4828
SHREVAL	χ^2	3.1168(3)
	p	0.3740

Comments : The results clearly showed complete independence between the respondents' involvement in the stock market and their opinions related to it. However it is important to be cautious in reaching any final conclusion because the indirect questions used might have distorted the information being sought. For example, while many respondents might have agreed to the suggested statements regarding the stock market and its Islamic alternative, that did not necessarily mean they would be part of the group that would have taken up the alternative, (had it exist).

Thus, a check was carried out by crosstabulating between investors and non-investors in the share market against the three independent variables above. The results were mixed. For instance, while the variables SMRLGN and SMISLAM maintained to be independent, the variable on stock market opinion (SMOPN) rejected the null-hypothesis at $p < 0.01$. This indicated an important point - that the opinion of the stock market had a direct influence among those respondents who did not hold any investment in shares. However, these opinions did not have any impact among the group having such investments.

What was perplexing was the fact that, while the frequency distribution on the variable SMOPN showed almost 80% of the respondents felt uncertain of the Islamic *Shari'ah* injunction on stock market investments, yet more than 77% claimed to hold shares. In other words, their uncertainties and the ambiguities in the *Shari'ah* rulings on investing in the stock market (at the time the survey was conducted) had not deterred them from participating in the market.

All these issues brought about an important implication to our study. While the results indicated that the Bumiputera Muslim investors were rather sensitive to the issues concerning their religion, their responses to the questions posed in the questionnaire did not seem to reflect or indicate that they had much enthusiasm to respond to an alternative Islamic financial system, either on the stock market or financial institutions such as the Islamic bank or Islamic insurance. We could also infer from the various distributions of related variables that, even if there had been an Islamic-based stock market, the response would only be meaningful if the latter could offer equally competitive returns relative to their risk exposure¹⁵. This fact could be further substantiated by looking at the number of investors who, while rejecting the interest-based institutions, did not indicate any participation in the shares of Bank Islam Malaysia when the bank went public and floated its shares in the market.

This indicated that apart from the religious sentiments prevailing within the community, the monetary returns and probably the risk factor as well, seemed (remained) to be among the dominant factors that would influence and determine the level of (Bumiputera) Muslims participation in the stock market. In this regard, we tend to ponder whether the Islamic ideals propounded and expounded by many political leaders and Muslim scholars in this industrialising country were mere rhetoric with little support from the Muslims' community, or were they a serious Government's propaganda aiming to mobilise more Muslim's financial resources in an Islamic way.

On the other hand, it could also be possible that the conflicting responses we saw earlier (between the respondents' beliefs and their actions) were brought about by the developments of *ijtihad*¹⁶ of some modern Muslim scholars who opined that it was legitimate for the Muslims to invest in the stock market¹⁷. Hence, we saw that while

¹⁵ See the earlier Chapters 4 and 5 for further discussion on these related issues.

¹⁶ This is defined as an independent judgement and interpretation of the *Shari'ah*.

¹⁷ See Chapter 6 for more detail discussion of the subject matter.

some respondents might have accepted these opinions, others might still be uncertain about it. Perhaps a more detailed analysis needs to be conducted either to support or refute this suggestion.

9.4.1.7 Summary of Tests

Each of the tests conducted in this section attempted to explore the presence of any relationship between two variables (a dependent and an independent), all of which were selected to represent the various conceptual factors found in the hypothetical model constructed earlier. The idea was to test the validity of the claim that the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market include issues such as their (i) lack of investible financial resources, (ii) preference for investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) religious beliefs that investing in the stock market was not permissible in Islam. However, it is important to note that, the main thrust of the thesis did not rest upon the outcomes of these tests alone. The process to determine the validity or invalidity of the model and hence our hypothesis, would require more rigorous statistical tests than bivariate analysis. These will be conducted in the following chapter.

Meanwhile, apart from the various objectives outlined earlier¹⁸, the main task remained to determine the (probable) reasons for not having a meaningful response from the Bumiputera Muslims in the stock market. If we were able to show that some of the factors suggested above had indeed influenced the community's involvement, then this would enable us to explore the means and potential for enhancing their equity participation in the market. For instance, if the test results showed that there existed strong relationships between the level of stock investment and the respondents' religious sentiments, then we could explore the possibility and implication of establishing an

¹⁸ See Chapter 7, section 7.3.1.

Islamic-based stock market. Nevertheless, whether such an institution would be influential and more appealing to the Muslims and hence, would bring about greater participation from them, are yet separate and debatable issues.

The tests conducted above showed several conflicting results and thus care must be taken in interpreting them, especially in the light of the limitations and constraints in the nature of the data set involved, and the limited statistical tools that could be applied. In summary, based on the bivariate analyses conducted above, we conclude that :

1. while the tendency to invest in the equity market (either in stocks or unit trusts) was independent of the respondent's personal income, there existed a clear relationship between his level of investment (as denoted by his share values) and his total household income;
2. the respondents' savings characteristics were directly related to both the percentage and amount of their investment in the stock market. Nevertheless, while the former (that is, the percentage of their investment in equities) seemed to be independent of their age, marital status and length of service, the latter showed significant relationships with these variables. This implies that disposable income and personal financial obligations did influence the respondents' propensity to invest;
3. if the respondents' choice of investment types could be taken as an acceptable proxy to reflect their investment attitudes, then they could be regarded as being risk averse. This was because of their preference to invest in less risky unit trusts schemes, houses and land rather than the riskier stocks and shares in the capital market;
4. the respondents' personal and educational background as well as their knowledge of the stock market did seem to influence in some ways their level of participation in holding shares; and finally,

5. the respondents' religious opinions of the stock market seemed to provide mixed reactions. While most who considered the investment mode as unIslamic had stayed away from investing, almost 80% of those who admitted to be uncertain of the Islamic *Shari'ah* injunction on stock market investments, still claimed to be holding shares (either directly or through the ASN/ASB unit trusts schemes). In other words, generally, there was no reason to believe that the level of Bumiputera Muslims participation in equity investment had any significant relationship with their religious sentiments.

9.4.2 Variables Not Associated with the Model

While the previous section presented the results of crosstabulations' measures of association between the sets of dependent and independent variables associated with the model, this part attempts to draw further related information from the remaining variables that have not been included in the model.

There are five sections following this and each section represents the respective parts in the questionnaire. We selected a few relevant variables within each part and crosstabulated them against a few others. The objective was to draw further information from the responses gathered in the survey so as to complement the existing results obtained from the previous tests. Part One of the questionnaire (which sought some general background information on the respondents) has been omitted because it was not relevant for the issues under study.

9.4.2.1 The dependent variable, ECONACHV.

From the various questions posed in part two of the questionnaire, we selected the variable ECONACHV which measured the respondent's opinion toward the Bumiputera Muslims economic achievements as the dependent variable. As we have

seen earlier, although almost 50% of the respondents were not satisfied with the Muslims economic achievement in the country, we attempted to check whether these responses were in any way related to their personal background or dissatisfaction of the Government economic policies for the Bumiputera Muslims.

Thus the independent variables selected were : (i) level of satisfaction with the Government's economic policies for the Bumiputera Muslims (ECONPLCS); (ii) age (AGE); (iii) education background (EDUC); (iv) number of years working (YRSWRK); (v) monthly-income (MTHINC); (vi) spouse's income (SPOSINC); occupation (OCCPN1); and (vii) occupation sector (OCCPN2).

Results :

Table 9.15(a)
Results of Spearman's Correlation Coefficients

VARIABLE	ECONPLCS	AGE	EDUC
ECONACHV	0.4209	0.0532	0.1350
	N(564)	N(570)	N(570)
	Sig 0.000*	Sig 0.205	Sig 0.001*

Table 9.15(b)
Results of Spearman's Correlation Coefficients

VARIABLE	YRSWRK	MTHINC	SPOSINC
ECONACHV	0.0313	0.0811	- 0.0702
	N(567)	N(570)	N(374)
	Sig 0.457	Sig 0.053	Sig 0.176

Table 9.15(c)
Results of Kruskal-Wallis and Chi-square tests

VARIABLE	OCCPN1	OCCPN2
ECONACHV χ^2	4.5308(2)	0.7308(2)
p	0.1038	0.6939

Comments : As can be seen from the three tables above, only two variables, ECONPLCS and EDUC, were significantly related to ECONACHV. Although the correlation between ECONACHV and EDUC was rather weak, there seemed to be a

moderate positive relationship between the variables ECONACHV and ECONPLCS. In other words, those who might have claimed to have been dissatisfied with the Bumiputera Muslims economic achievement, also seemed to be satisfied with the economic policies at the same time. This was rather difficult to understand because the frequency distribution showed almost 50% of respondents' dissatisfaction to the latter while about 44% of the same group felt satisfied with the economic policies. The plausible reason to explain the situation was that the respondents could have been dissatisfied in the policies' implementation rather than in the policies themselves.

Secondly, apart from education background, the results also showed complete independence of all the remaining variables. Thus, the results from this section indicated that the Bumiputera Muslims were generally not satisfied with their economic achievements, irrespective of their personal background and their opinion of the policies designed to enhance their economic position.

9.4.2.2 The dependent variables ECONPLCS, REVPLCS and FOSINVS.

In this section, we attempted to draw information on the probable associations or relationships between several sets of dependent and independent variables. The three dependent variables selected were : (i) ECONPLCS, which measured the respondents' level of satisfaction with regard to the economic policies; (ii) REVPLCS, their opinion whether there was a need to review the policies of wealth distribution; and (iii) FOSINVS, their responses to the suggestion of introducing a "forced-investment" policy to enhance Bumiputera Muslims participation in the capital market.

On the other hand, the independent variables identified were : (i) ASNSCHME, which measured their satisfaction with the Government's unit trust schemes; (ii) MSMINVS and SMENCRG, both of which indicated the respondents' opinions toward the Government's efforts in encouraging Bumiputera Muslims to participate in the stock

market; (iii) ASNBNFT, which suggested that the Government unit trust schemes have mostly benefited the rich; and finally, (iv) GAPWIDEN, which inquired whether they agree that the Bumiputera Muslims intra-community economic gap has widened.

Results :

Table 9.16
Results of Spearman's Correlation Coefficients with ECONPLCS

VARIABLE	ASNSCHME	MSMINVS	ASNBNFT	GAPWIDEN
ECONPLCS	0.5385	0.5435	- 0.0747	- 0.1654
	N(565)	N(566)	N(564)	N(564)
	Sig 0.000*	Sig 0.000*	Sig 0.076	Sig 0.000*

Table 9.17
Results of Spearman's Correlation Coefficients with REVPLCS

VARIABLE	ECONPLCS	ASNBNFT	GAPWIDEN
REVPLCS	- 0.1609	0.1494	0.2862
	N(562)	N(561)	N(562)
	Sig 0.000*	Sig 0.000*	Sig 0.000*

Table 9.18
Results of Spearman's Correlation Coefficients with FOSINVS

VARIABLE	ECONPLCS	ASNBNFT	GAPWIDEN	SMENCRG
FOSINVS	0.0965	0.0243	0.0527	0.0968
	N(562)	N(561)	N(562)	N(561)
	Sig 0.022	Sig 0.566	Sig 0.212	Sig 0.022

Comments : In table 9.16, apart from the variable ASNBNFT, all the remaining variables showed statistically significant relationships with the dependent variable ECONPLCS. This implied that those who were satisfied with the unit trust schemes and the Government's efforts to encourage them to invest in the capital market, were also satisfied with the policies. The inverse relationship with the variable GAPWIDEN was expected because this indicated that the respondents who agreed the Bumiputera Muslims intra-community economic gap has widened must have also been dissatisfied

with the government's policies. Thus the responses to these questions seemed to be consistent.

In table 9.17, all the three tests rejected the null-hypothesis of independence at a very high significant level of $p < 0.0001$, implying the high probability of seeing such associations occurring in the population from which the sample was drawn. Although the correlations were all very weak, here again the results showed consistencies in the respondents' responses in wanting the Government to review the existing policies of wealth distribution, even among the Bumiputera Muslims so as to narrow the gap between the upper and lower classes.

Finally in table 9.18, all the results did not allow us to reject the null-hypothesis of independence, that is, they did not show any significant relationships with the variable FOSINVS. In the previous chapter, the frequency distribution showed 64% of those who responded agreed that the Government should introduce some form of a "forced-investment" policy in order to enhance the Bumiputera Muslims participation in the stock market. In other words, the respondents' opinion toward this policy was completely independent of their responses to the other four questions (or variables). A cross check against other variables such as income, age and marital status also did not indicate any dependency; this implied the strength of the opinion towards "forced-investment".

9.4.2.3 The dependent variables SMISLAM and SMOPN.

This section attempts to determine whether there existed any relationships between the respondents' opinions of investment in the stock market and their personal background. Earlier we have seen that in most cases, the respondents' opinions on matters related to religion seemed to be independent of their actions. For instance, although they might have disagreed with the interest-based institutions, at the same time

they maintained their savings and have preferred to invest in these institutions rather than the Bank Islam Malaysia's stocks. For this reason, we intended to explore this matter further, to determine whether their personal background played any significant role in influencing their preferences.

The two dependent variables SMOPN and SMISLAM inquired their opinions of the existing stock market (from the Islamic perspective) and whether they believed an Islamic-based stock market would influence more Bumiputera Muslims to invest in shares, respectively. The independent variables selected were : (i) AGE; (ii) EDUC; (iii)YRSWRK; (iv) MTHINC; (v) SPOSINC; (vi) OCCPN1; (vii) OCCPN2; (viii) knowledge of the stock market (SMKNWL); and (ix) whether they have any investment in shares (SMINVS).

Results :

Table 9.19(a)
Results of Spearman's Correlation Coefficients with SMISLAM

VARIABLE	AGE	EDUC	YRSWRK	MTHINC	SPOSINC
SMISLAM	0.0229 N(572) Sig 0.584	0.0661 N(572) Sig 0.115	0.0720 N(569) Sig 0.086	0.1813 N(572) Sig 0.000*	0.0317 N(376) Sig 0.539

4.

Table 9.19(b)
Results of Kruskal-Wallis and Chi-square tests with SMISLAM

VARIABLE		OCCPN1	OCCPN2
SMISLAM	χ^2	4.2387(2)	5.2175(2)
	p	0.1201	0.0736

Table 9.20(a)
Results of Kruskal-Wallis and Chi-square tests with SMOPN

VARIABLE		SMKNWL	AGE	EDUC
SMOPN	χ^2	1.3174(5)	1.8900(4)	1.0977(4)
	p	0.9331	0.7560	0.8946

Table 9.20(b)
Results of Kruskal-Wallis and Chi-square tests with SMOPN

VARIABLE	YRSWRK	MTHINC	SPOSINC
SMOPN χ^2	2.2644(3)	3.0452(6)	3.9976(6)
p	0.5194	0.8032	0.6770

Table 9.20(c)
Results of Kruskal-Wallis and Chi-square tests with SMOPN

VARIABLE	SMINVS	OCCPN1	OCCPN2
SMOPN χ^2	24.9498(3)	8.4687(6)	8.4954(6)
p	0.0000*	0.2057	0.2040

Comments : In tables 9.19(a) and (b), apart from the variable on monthly income (MTHINC), the opinion on whether "a large number of Muslims would participate in an Islamic-based stock market" was found to be independent of the respondents' background. In fact, the relationship with monthly-income was not even expected due to the insignificant relationships with the variables on occupation (both OCCPN1 and OCCPN2) in table 9.19(b). This is because we have seen earlier that the occupation variables were closely related to monthly-income. However, in conducting the chi-square test on the crosstabulation of these two variables (SMISLAM BY MTHINC), we noticed a large positive residual between the observed and expected frequencies in the "agreed/lower income bracket" cell of the table. This implied that the response was more popular among the lower income bracket respondents. Nevertheless, in terms of the frequency distribution, almost 70% of the respondents agreed that the presence of an Islamic-based stock market would have influenced the Bumiputera Muslims participation in equity investment.

We next look at the results in tables 9.20 (a), (b) and (c) to test for the presence of any relationships between the respondents' opinion of the existing stock market (SMOPN) and their personal background. Of the nine variables tested, only one variable (SMINVS) rejected the null-hypothesis of independence at $p < 0.01$ with a chi-square value of 24.95 at 3 degrees of freedom. This indicated that there existed a significant

relationship between the respondents' opinion of the stock market (SMOPN) and their responses to the variable "whether they had any stock market investments" (SMINVS). These two variables were also tested for symmetric association and the result remained the same.

In short, apart from the variable (SMINVS), the remaining results confirmed our earlier findings that showed that the respondents' opinions on the Islamicity of the existing stock market were not influenced by any of their personal background (such as age, education level, income, occupation, etc.).

9.4.2.4 The dependent variables, SVPRCN and SVTOTAL.

In part five of the questionnaire, the respondents were asked about their savings background. The aim was to relate this information with their investment patterns and personal background from the other parts of the questionnaire. Since the variables on respondents' investment have been dealt with when analysing the model in the previous section, we shall now test for any relationships between their savings pattern and personal background. The two dependent variables that have been selected were : (i) SVPRCN, the percentage of the respondent's total income being saved each time; and (ii) SVTOTAL, the total value of their savings (excluding investment). As in the previous tests, the independent variables selected were : (i) AGE; (ii) EDUC; (iii) DEPNDNT; (iv) YRSWRK; (v) MTHINC; (vi) SPOSINC; (vii) SEX; (viii) MARITAL; (ix) OCCPN1; and (x) OCCPN2.

Results :

Table 9.21(a)
Results of Spearman's Correlation Coefficients
with SVPRCN and SVTOTAL

VARIABLE	AGE	EDUC	DEPNDNT	YRSWRK	MTHINC	SPOSINC
SVPRCN	0.0289 N(527) Sig 0.508	- 0.0609 N(527) Sig 0.163	- 0.0143 N(498) Sig 0.750	0.0189 N(525) Sig 0.666	0.1104 N(527) Sig 0.011	0.1237 N(342) Sig 0.022
SVTOTAL	0.3379 N(528) Sig 0.000*	0.1675 N(528) Sig 0.000*	0.0614 N(499) Sig 0.171	0.2876 N(527) Sig 0.000*	0.4648 N(528) Sig 0.000*	0.2204 N(345) Sig 0.000*

Table 9.21(b)
Results of Mann-Whitney, Kruskal-Wallis and Chi-square tests
with SVPRCN and SVTOTAL

VARIABLE	SEX	MARITAL	OCCPN1	OCCPN2
SVPRCN χ^2	(Z = -1.1890)	2.9677(3)	4.0581(2)	2.4688(2)
p	0.2345	0.3966	0.1315	0.2910
SVTOTAL χ^2	(Z = -2.6451)	30.6504(3)	17.4821(2)	11.9099(2)
p	0.0082*	0.0000*	0.0002*	0.0026*

Note: The Mann-Whitney test with the variable SEX, showed the Z values rather than the χ^2 .

Comments : The results in both tables above showed that there were no significant relationship between the respondents' "percentage of monthly income being saved" (SVPRCN) and all the ten independent variables. Although the initial expectation was to observe some relationships between SVPRCN and age, marital status, number of dependants and their monthly income, surprisingly these did not appear. Nevertheless, apart from the variable "number of dependants" (DEPNDNT), the tests indicated significant associations between the respondents' total savings and all the independent variables. As expected, a relatively strong positive correlation was also found between the savings total and monthly-income.

9.4.2.5 The dependent variables, SMKNWL, INVSTYP, INVSTOTL, NOSMINV and YNOASN.

The variables selected here were from the investment section of the questionnaire. Although most of them have already been tested within the model (in part 9.3), we attempted to explore further the associations of a few remaining variables. Firstly, the variable "understanding of the stock market" (SMKNWL) was tested against the respondents' personal background to check whether the latter had in any way influenced the former; secondly, the variable "investment types" (INVSTYP) against "risk perception of the stock market" (SMRISKY), to check whether the respondents' opinion of the stock market as a risky investment had influence their choice of investment; thirdly, the variable "investment total" (INVSTOTL) against "investment types" (INVSTYP), to determine which of the various types of investment had influenced the respondents' investment values; and finally, the two variables "reasons for not having any investment in shares" (NOSMINV) and "reasons for not investing in the unit trusts" (YNOASN) against the respondents' "opinion of the stock market" (SMOPN).

Results :

Table 9.22(a)
Results of Spearman's Correlation Coefficients with SMKNWL

VARIABLE	AGE	EDUC	YRSWRK	MTHINC	SPOSINC
SMKNWL	0.0223	- 0.1142	0.0548	- 0.1508	0.0247
	N(436)	N(436)	N(434)	N(436)	N(304)
	Sig 0.643	Sig 0.017	Sig 0.255	Sig 0.002*	Sig 0.668

Table 9.22(b)
Results of Kruskal-Wallis and Chi-square tests with SMKNWL

VARIABLE		OCCPN1	OCCPN2
SMKNWL	χ^2	4.0947(2)	0.6044(2)
	p	0.1291	0.7392

Table 9.23
Results of Kruskal-Wallis and Chi-square tests
(with the respective dependent and independent variables)

VARIABLE	SMRISKY	VARIABLE	SMOPN
INVSTYP χ^2	5.5384(3)	NOSMINV χ^2	18.2233(12)
p	0.1364	p	0.1091
VARIABLE	INVSTYP	VARIABLE	SMOPN
INVSTOTL χ^2	91.4168(5)	YNOASN χ^2	7.2038(8)
p	0.0000*	p	0.5148

Comments : Apart from the significant relationship between SMKNWL and MTHINC, the results in tables 9.22(a) and (b) showed that the respondents' level of understanding and knowledge of the stock market was independent of their personal background. The negative correlation coefficient with "monthly-income" (MTHINC) implied that the higher the income, the more knowledgeable and well-informed the respondent was. This seemed to fall in line with our earlier results, where a respondent's monthly-income was seen to be closely associated with his education level, age, occupation, length in service, etc.

In table 9.23, of the four tests conducted, only the variable "total investment" (INVSTOTL) showed a significant relationship with the "investment types" (INVSTYP). The crosstabulation of this test also indicated that the respondents' choice of investment (such as their preference of investing in houses, land, etc.) had indeed influenced the total size of their investment. For instance, those respondents who only had investment in stocks (but no houses or land) were seen to have relatively smaller investment sizes than those who did invest in the assets.

The test between the variables INVSTYP and SMRISKY indicated that there was no significant relationship between the respondents' choice of investment and their opinion of the stock market as a risky investment. In other words, we could infer that there seems to have been an established preference in the type of investments among the Bumiputera Muslim investors, regardless of their opinion of the stock market.

Finally, in the remaining two tests between NOSMINV/YNOASN and SMOPN, notice that here again, there were no significant relationships. This means that the reasons for the respondents not having any investment in shares or unit trusts were independent of their opinions on the Islamicity of the existing stock market. Thus, the respondents who chose not to participate in the stock market did not necessarily indicate that it was due to their religious convictions. There could possibly be other reasons for them not being able or willing to invest in shares, such as having low disposable income, personal financial commitments, other investment priorities or lack of appreciation of the stock market itself.

However, in the previous part 9.4.2.3, our results in table 9.20(c) showed that the respondents' opinion of the stock market was significantly related to the question of "whether they have any stock market investments". These conflicting results was probably due to the relative sensitivities of the tests toward the sample size of the variables involved. With a small sample, the likelihood of a sample error is much higher than with a large sample. With small samples it is often difficult to achieve statistical significance. On the other hand, with large samples the probability of sampling error is much less. For example, the variable "reasons for not investing in the unit trusts" (YNOASN) had only 41 cases as compared to 531 cases recorded for the variable "any stock market investment" (SMINVS). Recall that the total sample size was 575 cases. Nevertheless, such a perplexing outcome would still require some other advanced method of analysis before a more concrete suggestion could be offered.

9.5 Conclusion

Moving beyond the initial univariate analysis of the previous chapter, the focus here was still kept simple by examining bivariate relationships between different pairs of variables. There were three main sections that discussed the tests on these variables :

firstly, we attempted to analyse the independence of responses to the survey questionnaire from two unrelated groups of respondents, that is, between the Kuala Lumpur and non-Kuala Lumpur residents; secondly, we wanted to explore the presence of any significant relationships between several pairs of variables within the hypothetical model, discussed earlier in chapter seven. The model attempts to relate the respondent's level of stock market participation with several factors such as income, investment preference, attitude towards risk, personal background, religious opinion and several others. Finally, since the model did not include all the variables and information gathered in the questionnaire, we decided to explore further the significance and degree of influence of several other remaining variables, pertinent to the study.

In the first analysis of independence between the responses of Kuala Lumpur and non-Kuala Lumpur respondents, the initial expectation was to find some significant differences, especially in matters related to savings and investment. This was based on the assumptions that those from Kuala Lumpur : (i) were presumably earning more than the respondents from other towns; (ii) were more directly exposed to and influenced by the capital-city life; and (iii) were within closer and easier reach of immediate public and privately held business information of the market, such that their attitude and business outlook might possibly be different from those living elsewhere. However, after conducting the test on all the seventy-two variables, we concluded that in general, *there was no reason to believe that the responses from the respondents in Kuala Lumpur were significantly different from those of other cities.*

The second set of analyses was more elaborate than the previous one. It also involved identifying the relevant dependent and independent variables to represent the conceptual factors constructed in the model. The null-hypothesis was that "the level of Bumiputera Muslims involvement and participation in the stock market of Malaysia *was independent* of their household income, savings and investment attitudes, educational background, knowledge or appreciation of the stock market, attitude towards risk, and

Islamic conscience and convictions". The level of their participation was measured by using two variables, namely, the total value of their shares investment and the percentage of their total investment held in the form of shares. However, since all the tests were conducted at the bivariate level, involving only two variables at a time, it was sometimes difficult to draw strong inferences from the tests results. While many of the findings had enabled us to infer upon the attitudes and general feelings or opinions of the respondents, some tests produced mixed reactions and a few even gave conflicting signals.

In summary, our test results produced some pertinent information that could be used to infer upon the nature and characteristics of the Bumiputera Muslims investors in general. Firstly, we found that there existed a significant relationship between the respondents' level of investment in shares and their total household income. Secondly, there was a positive and significant relationship between the respondents' savings behaviours and their investment attitudes. At the same time, it was also apparent that the respondents' ability or willingness to invest in the stock market was dependent upon their disposable income and personal financial obligations. Thirdly, the test results indicated the risk averse attitude of the respondents, who preferred to invest in less risky investment ventures such as the Government-supported unit trusts schemes, housing or land, relative to the more risky investments of stocks and shares in the capital market. Fourthly, the variables "appreciation of the stock market" and "education level" showed positive correlations with the level of the respondents' investment participation. Finally, there were also some inconsistencies in the test results that measured the relationships between the respondent's investment participation and their religious opinion of the stock market. For example, while many felt uncertain on the Islamic *Shari'ah* rulings of investing in the stock market, their opinions did not deter them from participating in it. In other instances, although they (indirectly) indicated their preference for an Islamic-based stock market (or financial system), there was insufficient evidence to claim that

the institution would receive meaningful support or response from the Bumiputera Muslims community.

In the final section of the bivariate analyses, we attempted to draw further information from the remaining untested data set so as to shed further light to the issues under study. The general conclusions drawn either supported or complemented many of the previous findings. Among others, the results showed that : (i) firstly, there was a common feeling of dissatisfaction among the Bumiputera Muslim respondents with regard to the community's economic achievements. We inferred that the dissatisfaction was more in the manner the policies were implemented rather than the policies themselves; (ii) secondly, most of the respondents who wanted the Government to review its economic policies (with respect to enhancing the Bumiputera Muslims equity distribution and participation), also agreed that the intra-community economic gap has widened over the years; (iii) thirdly, there was overwhelming support for the suggestion of introducing forced-investment among the Bumiputera Muslims, and the responses were independent of the respondents' social status; (iv) fourthly, the opinion on the Islamicity of the stock market was also independent of the respondents' background; and finally, (v) although the opinion that "the existence of an Islamic-based stock market would influence a larger number of Bumiputera Muslims to participate in shares investment" was not significantly related to the respondents' personal status, the idea was relatively more popular among the lower-income groupings of the sample.

More often than not the patterns revealed in these initial analyses were not as expected or hoped for. Anticipated patterns either did not exist or were weaker than expected while some were even contradictory. However, as De Vaus (1993) rightly pointed out, "the real world never fits our theories as neatly as we would like. The point of research ought not to be to fit reality to some pet theory but to develop a theory which fits empirical reality. The mark of a good researcher is not the ability to formulate

hypotheses or hunches that turn out to be correct but the ability to make sense of data and to analyse them intelligently"¹⁹.

There is a need to exhaust all possible and available statistical tools before any conclusive suggestion can be offered. Hence, we shall move on to employ more advanced statistical techniques such as the factor analysis and hierarchical loglinear model analysis to complement these initial findings. This will be done in the following chapter.

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¹⁹ See De Vaus (1993 : p. 291).

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CHAPTER 10

UNDERLYING DETERMINANTS INFLUENCING INVESTMENT PATTERNS OF BUMIPUTERA MUSLIM INVESTORS IN MALAYSIA : A MULTIDIMENSIONAL ANALYSIS

10.1 Introduction

The last two chapters on univariate and bivariate analyses revealed much valuable information offering some answers to many of the issues being examined. At the same time, the test results had also shed further light on the characteristics and attitudes of the Bumiputera Muslim investors in Malaysia. The univariate analysis in chapter eight involved the process of examining the distribution of responses from the respondents (in the survey) through the use of frequency distribution tables and associated statistics. The objective was then to provide a detailed description of the sample data so as to offer an idea (or a picture) of the kind of respondents involved in the survey. The examination of the distribution of various sociodemographic variables such as sex, marital status, education background, income, age, etc., enabled us to check on the possible existence of any bias in the sample which may help to explain for patterns we would observe in further analysis.

In the previous chapter, we conducted the bivariate analysis to explore the presence of any significant relationships among several pairs of variables. We employed the contingency tables and non-parametric statistics extensively to test for the relationships, especially among variables associated with the hypothesised model. As we have seen earlier, apart from some conclusive evidence, there were also many contradicting results and unanticipated patterns which were sometimes quite perplexing and difficult to explain. However, those stages of analyses were deliberately kept simple

in order to establish a strong foundation for more advanced analyses. Social scientists often start their analysis with the bivariate relationship and then work productively by gradually elaborating the relationship at the kernel of the model, thinking, refining their ideas, rejecting and including variables one at a time¹.

Nevertheless, although it would still be possible and simpler to gather some information by examining the relationships between these variables a pair at a time, there would be serious disadvantages if the examination was restricted solely to this approach. Most analyses of sample data would require the examination of more than two variables simultaneously before being able to draw any valid conclusion. This is because in most cases, the causal effect relationships could not be established by only looking at bivariate relationships in isolation.

In exploring other techniques beyond bivariate analyses, the issue of level of measurement needs to be considered. This matter has been discussed in some detail earlier (in chapter seven) because it was very important for us to ensure that we did not use techniques of analysis that assume the sample data to contain more information than it actually did. There is a family of techniques that are particularly suitable for the analysis of sociological data that do not demand measurements to be made at the metric or interval level. Apart from the non-parametric tests and crosstabulations, we could also use the multi-dimensional scaling, factor analysis and loglinear modelling. The latter is most appropriately used with data measured at the categorical level, though it can also be used with ordinal data. As for factor analysis, there are authors who suggested it be carried out only with interval level variables². However, many examples have shown that the method could still be applied to categorical ordinal data³.

¹ See Marsh (1982 : p. 85).

² For example, see Gilbert (1993 : p. 23).

³ See Bryman (1990) Norusis (1990a) and Jaeger (1990).

The objective of this chapter is to explore the possibility of obtaining further information from the survey sample by employing the two techniques of loglinear models and factor analysis to either complement or reaffirm our earlier findings. The chapter has been divided into six sections. Section two will discuss the underlying concepts of loglinear models and the SPSS procedure of HILOGLINEAR. This is followed by section three which provides an analysis of the results on the sample data. Section four discusses the concept of factor analysis and section five will examine its corresponding results. Finally, section six concludes the chapter.

10.2 Concepts of Loglinear Models⁴

10.2.1 Association, Interaction and Elaboration

As we have seen earlier, a primary concern in analysing a crosstabulation is to test for relationships between the variables. When two variables are related so that the level of one variable makes a difference to the distribution of respondents on the other, the relationship is termed as having an "association". When three variables are related in a way such that the association between two of them changes according to the level of the third, the relationship among the three variables is termed an "interaction", or sometimes called "specification"⁵. For example, in examining the relationships between the "percentage of investment in the stock market" and "income level", we could also

⁴ Several explanations on this part have been adapted from various literatures, especially from Norusis (1990a : Chapters 9 and 10) and Gilbert (1993).

⁵ This statistical meaning of "interaction" should not be confused with common use of the word that refers to exchanges between two or more people. For further explanations, see Rosenberg (1968) and Gilbert (1993).

include a third variable, say, "religious opinion of trading in shares" to look for the presence of interaction effects among the three of them.

The procedure of examining the crosstabulation of two variables, then looking for changes in the degree of association between the two variables after controlling for a third, is called "elaboration". Elaboration is a simple technique of analysing the mutual influence of three variables when one is clearly having a causal effect on the other two. However in practice, it is usually limited to the analysis of three cross-classified variables. Since a partial table is obtained for each category of the control variable, in cases where there are more than two or three levels, the comparison of partial tables will quickly become unmanageable. Moreover, in many instances it is not clear which of the three variables would be best chosen as the control variable. In short, crosstabulation of more than three variables cannot conveniently be analysed using elaboration because there would be too many partial tables needing to be compared⁶. Besides, there may be associations between each of the pairs of variables as well as interaction among all of them. In cases with four and five dimensional tables, the number of possible relationships multiplies alarmingly. The number of cells rapidly increases and it would be difficult, if not impossible, to unravel the associations among the variables by examining only the cell entries.

The usual response of researchers faced with such problems is to compute a chi-square test of independence for each sub-table. However, this strategy is often fraught with problems and usually does not result in a systematic evaluation of the relationships among the variables. The classical chi-square approach also does not provide estimates of the effects of the variables on each other, and its application to tables with more than two variables is often very complicated⁷. It was at this stage that we thought the

⁶ See Gilbert (1993 : p. 43).

⁷ See Norusis (1990a : p. 308).

employment of loglinear models would provide a better alternative at offering some solutions to these problems.

10.2.2 Loglinear Models

There are several statistical models that could summarise data and measure relationships for multivariate tables. For example, regression analysis examines the relationship between a dependent variable and a set of independent variables. Similarly, analysis of variance (ANOVA) techniques provide tests for the effect of various factors on a dependent variable. However, neither of these techniques is appropriate for categorical data (which was one of the two forms of data we were dealing with), where the observations are not from populations that are normally distributed with constant variance.

Loglinear analysis is a special statistical technique that has been formulated to overcome this problem. These models are useful for uncovering the potentially complex relationships among the variables in a multiway crosstabulation. Loglinear models are similar to multiple regression models. However, in loglinear modelling, all variables that are used for classification are independent variables, while the dependent variable is the number of cases in a cell of the crosstabulation.

The statistical package SPSS provides two entirely separate commands in its Advanced Statistics Module for carrying out loglinear analyses, namely HILOGLINEAR and LOGLINEAR. The former uses the iterative proportional scaling algorithm while the latter uses a more flexible but more complex algorithm. In cases dealing with only the *saturated models*⁸, it is usually best to use the HILOGLINEAR

⁸These are models that contain all possible parameters with all possible effects of interactions - see the following section 10.2.3.

command unless other features which are available only in LOGLINEAR are required. However, parameter estimates for unsaturated models cannot be obtained with the HILOGLINEAR command. Since our interest in the analysis was to include all possible interactions that appeared in the form of saturated models, we chose to use the HILOGLINEAR procedure.

Within the HILOGLINEAR command, we also had the choice of using either the *forward selection* or *backward elimination* methods in model-building. In simple terms, what actually takes place when the command is used (regardless of whether we used the "forward selection" or "backward elimination" criteria) is that, the system will generate a series of models in an iterative manner which will attempt to find the *best-fitting model* or models that best represent the interaction effects among all the defined variables. The processing would be based on the frequency distributions in each cell of the multitude tables. For example, supposing we wish to find out the possible interactions among a set of variables such as "total value of investment in shares", "monthly income", "education level" and "occupation", the system command will attempt to find the *best relationships* that existed among these variables through iterative processes, and the iteration will only stop when no other higher significant interaction appears to be present. This will enable us to identify the significance of these variables in relation to the others in the set⁹.

10.2.3 Saturated, Independence and Hierarchical Models

In multiple cross-classification tables, the loglinear model will set the number of cases in a cell as a function of the values of the row and column variables, as well as

⁹However, among the setbacks faced with the SPSS for Unix Release 5.0 (Solaris 2.2) was that the iterative generation of the models involving more than five variables took a very long time (hours) to process, and required a much larger computer workspace than the size available. This led us to limit the number of variables used in each of the models designed.

their interactions. In obtaining a linear model, the natural logs of the cell frequencies, rather than the actual counts, are used¹⁰. In general, the model for the log of the observed frequency in the i th row and j th column of the matrix RC is given by¹¹ :

$$\text{Ln } F_{ij} = \mu + \lambda_i^R + \lambda_j^C + \lambda_{ij}^{R:C}$$

where F_{ij} is the observed frequency in the respective cell R_iC_j , λ_i^R is the effect of the i th row variable (R), λ_j^C is the effect of the j th column variable (C), and the $\lambda_{ij}^{R:C}$ is the interaction effect for the i th and j th values of the respective variables. The term μ is comparable to the grand mean in the analysis of variance (ANOVA) and is simply the average of the logs of the frequencies in all table cells. On the other hand, the lambda parameter is estimated by finding the difference between the average log of the frequencies in a particular category and the grand mean (hereagain, in similar fashion to ANOVA). Thus, in general, the effect of a particular category of a variable, called the *main effect*, is estimated as follows : $\lambda_i^{\text{VAR}} = \mu_i - \mu$, where μ_i is the mean of the logs in the i th category and μ is the grand mean.

The term $\lambda_{ij}^{R:C}$ above is also referred as the *interaction parameters* which represent the effect associated with particular combinations of values between the variables¹². It indicates the difference between the sum of the effects of variables taken individually and collectively. In general, it is estimated by rearranging the above equation and is given by : $\lambda_{ij}^{R:C} = \text{Ln } F_{ij} - (\mu + \lambda_i^R + \lambda_j^C)$.

A fully *saturated loglinear model* is one that contains all possible main-effects and interaction terms. However, representing an observed-frequency table with such a model does not necessarily result in a simple description of the relationship between the

¹⁰ For example, if the cell count is 250, then the value used in the model equation is $\ln 250 = 5.5214609$.

¹¹ See Norusis (1990a : p. 309).

¹² There will be as many *interaction parameters* as there are cells and as many *main effects* as there are categories of row and column. For instance, in a 2x3 matrix, there will be 6 interaction parameters and 5 main effects.

variables. Nevertheless, it serves as a good starting point for us to explore other models that could be used to represent the data. For example, we may later wish to develop what is termed an *independence model* (where only the main effects are included) or an *unsaturated model* (where not all possible parameters are being included). The generation of the independence model is comparable to the chi-square test of independence between the observed and expected frequencies of the cells count. The Pearson and likelihood-ratio chi-square statistics would then be computed for the goodness-of-fit test.

Apart from the above, we can also generate different models by deleting certain terms from the initial saturated form. Although it is possible to delete any particular term from a model, in loglinear analysis, attention is often focused on a special class of models called the *hierarchical models*. As Norusis (1990a: p.317) indicated, in this type of model, if a term exists for the interaction of a set of variables, then there must be lower order terms for all possible combinations of these variables. This simply implies that, for example, in analysing a three-variable model ABC, if the term λ^{ABC} is included in a model then the lower order terms λ^A , λ^B , λ^C , λ^{AB} , λ^{BC} , λ^{AC} must also be included.

10.2.4 Model Selection

As in regression analysis, the same guidelines apply for selecting the loglinear models. The model chosen should be the one that best fits the data, be substantively interpretable and as simple as possible. Since models of higher-order interaction terms are difficult to interpret, given a choice, they should not be preferred.

There are basically two forms of variable selection algorithm, the *forward selection* and the *backward elimination* algorithms. Forward selection adds effects to a

model, while backward elimination starts with all effects in a model and then removes those that do not satisfy the criterion for remaining in the model. By default, the HILOGLINEAR criterion for remaining in the model is to have an observed significance level of less than 0.05 in the "change of likelihood-ratio chi-square" value for every iteration. Since backward elimination appears to be the better procedure for model selection, we shall be using it in our analysis¹³.

To illustrate this point further, we shall use our previous example of the four variables with a generating class of SHREVAL*INCOME*EDUC*OCCPN¹⁴. The system will initially test for these *fourth-order interactions* and check whether the elimination of this term will result in a change of the chi-square value with an associated p-value of less than 0.05. If the p-value is greater than 0.05, the effect is removed and the next model will have a three-way interaction as its generating class. This will be repeated until no more effects can be removed from the model, that is, when all interactions in the model have p-values of less than 0.05. The final model will thus show the best-fitting interactions that are present in the set of variables defined.

10.3 Procedure HILOGLINEAR - Results and Analysis

We shall now return to the hypothetical model that was put forth in chapter seven, where we suggested that, among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market included issues such as their (i) lack of investible financial resources, (ii) preference of investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) the

¹³ See Benedetti and Brown (1978).

¹⁴ The variables refer to "total value of investment in shares", "monthly income", "education level" and "occupation" of the respondents, respectively.

impression that investing in stocks was equivalent to gambling and hence, not permissible in Islam. This was then formulated into an equation :

$$Y_i \equiv \text{fn} (\alpha + \sum \beta_n X_n + e), \text{ where } i = 1 \text{ to } 2; n = 1 \text{ to } 6; \text{ and}$$

Y_i = respondent's level of investment/involvement in the stock market,
represented by

Y_1 = respondent's percentage of total investment in stocks and shares, and

Y_2 = respondent's average market value of all their shares.

The independent variables X_1 to X_6 refer to the followings :

X_1 = gross household income;

X_2 = consumption and savings attitude;

X_3 = investment's attitude;

X_4 = educational background/knowledge of the stock market;

X_5 = level of risk preference/averse (that is, risk attitude);

X_6 = level of religious convictions/conscience; and

α = some constant value;

β_n = the respective coefficient of the independent variables X_1 to X_6 ;

e = some unexplained phenomena that have direct influence on the investors
interest in risky assets.

The next step was to employ the SPSS HILOGLINEAR procedure for six different pairs of designs that would correspond to each of the above independent variables against the dependent variables SHREVAL and ASNPRCN. As noted earlier, the statistical package used (SPSS for Unix Release 5.0) had the constraint of being able to accommodate no more than five variables in any one design due to the need of a larger computer workspace than what we could access. This could be due to the large number of combinations of the cells frequencies among the variables set. The need for the system to separate and analyse each of the main effects and all the cells parameter interactions could have also contributed to the problem. Thus, the approach in the design was to logically select four other variables that were likely to expose some expected interactions among themselves and the two dependent variables. The final

model generated by the system after a series of interactions would then show the extent of the relationships among the variables selected.

10.3.1 The independent factor, X₁ (household income).

In the previous chapter, we identified two variables to represent household income, the respondent's monthly-income (MTHINC) and the spouse's income (SPOSINC). However, in our first design we decided to include two other variables, occupation (OCCPN1) and the employment sector (OCCPN2) because they were expected to show strong interactions with both the dependent variables, SHREVAL and ASNPRCN.

Results :

Design 1A :-

```
(Section 1)
-> hiloglinear shreval mthinc sposinc(1,7) occpn1(1,4) occpn2(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*mthinc*sposinc*occpn1*occpn2.
```

```
(Section 2)
***** HIERARCHICAL LOG LINEAR *****
DATA      Information

292      unweighted cases accepted.
0        cases rejected because of out-of-range factor values.
283      cases rejected because of missing data.
292      weighted cases will be used in the analysis.
```

FACTOR		Information
Factor	Level	Label
SHREVAL	7	Average market value of all shares
MTHINC	7	Average monthly income
SPOSINC	7	Spouse average monthly income
OCCPN1	4	Occupation
OCCPN2	3	Which sector?

(Section 3a)
***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*MTHINC*SPOSINC*OCCPN1*OCCPN2

Likelihood ratio chi square = 0.0000 DF = 0 P = 1.000

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
SHREVAL*MTHINC*SPOSINC*OCCPN1*OCCPN2	1296	2.061	1.0000	4

Step 1 : The best model has generating class

SHREVAL*MTHINC*SPOSINC*OCCPN1
SHREVAL*MTHINC*SPOSINC*OCCPN2
SHREVAL*MTHINC*OCCPN1*OCCPN2
SHREVAL*SPOSINC*OCCPN1*OCCPN2
MTHINC*SPOSINC*OCCPN1*OCCPN2

Likelihood ratio chi square = 2.06106 DF = 1296 P = 1.000

(Section 3b)

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
SHREVAL*SPOSINC*OCCPN2	72	49.510	.9802	7
SHREVAL*OCCPN1*OCCPN2	36	33.848	.5713	8
MTHINC*SPOSINC	36	43.773	.1750	7
MTHINC*OCCPN1	18	52.089	.0000	5
SHREVAL*MTHINC	36	44.287	.1617	7
MTHINC*OCCPN2	12	17.634	.1273	8
SPOSINC*OCCPN1	18	16.146	.5824	7

Step 15 : The best model has generating class

SHREVAL*OCCPN1*OCCPN2
MTHINC*SPOSINC
MTHINC*OCCPN1
SHREVAL*MTHINC
MTHINC*OCCPN2
SPOSINC*OCCPN1

Likelihood ratio chi square = 357.89531 DF = 3852 P = 1.000

(Section 3c)

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
MTHINC*OCCPN1	18	61.032	.0000	2
SHREVAL*MTHINC	36	72.431	.0003	5
MTHINC*OCCPN2	12	23.068	.0272	2
SHREVAL*SPOSINC	36	80.635	.0000	5
OCCPN1*OCCPN2	6	136.332	.0000	2

Step 22 : The final model has generating class

```
MTHINC*OCCPN1  
SHREVAL*MTHINC  
MTHINC*OCCPN2  
SHREVAL*SPOSINC  
OCCPN1*OCCPN2
```

Goodness-of-fit test statistics

Likelihood ratio chi square = 498.91105 DF = 3984 P = 1.000

Pearson chi square = 1074.13432 DF = 3984 P = 1.000

Note : Since the computer print-out of the system commands were too elaborate, we edited them to show only the relevant information for our analysis. However, in Design 1A above, in order to describe the inferential procedure, several steps of the iterations were included. The remaining designs that follow shared a common set of procedures before arriving at the final step which had generated a class of the *best fitting model*. We shall explain these procedures briefly by taking Design 1A as an example. The result was divided into various sections for ease of explanation.

Procedure Description :

Section 1 : This section defined the running procedure of the HILOGLINEAR command. There were five variables involved in this model namely, SHREVAL, MTHINC, SPOSINC, OCCPN1 and OCCPN2. The values in the parentheses following the variables' names referred to the range of categories within the respective variables. The design used the backward elimination method, with the default p-value of 0.05 as the criterion for removal of any insignificant interactions. The command <delta> provides an option to add values for all empty-cells in the contingency tables (in this case 0 was added, that is, all empty-cells would remain as 0); and the maximum number of steps for the iteration has been defined to be 25.

Section 2 : This section is self-explanatory and provides both the data and factor information. They indicate the number of cases and variables involved. Notice the number of cases rejected because of missing data. Besides, since zero was added to

every empty cell, the number of unweighted and weighted cases would always remain the same. It is important to determine whether to include the empty cells in our analysis. In this case, their inclusion was irrelevant, hence their omission. Finally, the level within factor information showed the number of categories within each variable.

Section 3 : The final section showed the results of the process. As mentioned previously, by default the removal probability criterion in the iteration is set at $p = 0.05$. Thus at every step of the iteration, effects corresponding to the generating class were examined and the effect whose removal resulted in the least significant change in the likelihood-ratio chi-square, with a corresponding observed significance level larger than 0.05, would be eliminated. In simple terms, all interactions with the largest p value (that is, greater than 0.05) will be removed from the model one after another. This will continue until all the remaining interactions have p values of less than 0.05. The concept is quite similar to the change in R^2 values in regression analysis whereby the larger the R^2 value, the better the model. In this case, small values of chi-square are associated with good models¹⁵.

Thus in Section 3(a), the first step examined the fifth-order interactions and rejected them due to the large p -values. It has $p = 1.000$ with a chi-square change of 2.061 and 1296 degrees of freedom (DF)¹⁶. Notice that for a saturated model, the values of the chi-square statistic and degrees of freedom are always 0. In Section 3(b), step 15 has eliminated the third-order interactions of SHREVAL*SPOSINC*OCCPN2 which had the highest p -value of 0.9802, $DF = 72$ ($6 \times 6 \times 2$) and a chi-square change of 49.510. The backward elimination then continued, in this case until the twenty second step in

¹⁵ Thus, with backward elimination, the larger the change in likelihood ratio chi-square value, the better it is, provided it satisfies the condition of having $p > 0.05$ for the elimination.

¹⁶ Note : the computation for DF and chi-square follow the same standard formulae. $DF = (r-1) \times (c-1)$. (In this case, $DF = 6 \times 6 \times 6 \times 3 \times 2 = 1296$). The formula for Pearson chi-square has been given in the previous chapter. The formula for likelihood-ratio chi-square is : $L^2 = 2 \sum \sum O_{ij} \ln (O_{ij}/E_{ij})$, where O and E are the observed and the expected frequencies of the respective cells.

Section 3(c) by which time none of the two-way interaction effects could be removed from the model. At that stage, all the p-values were much smaller than 0.05. The last column indicated the number of iterations required to achieve convergence for the respective two-way effects. The final model consisted of five second-order interactions and had Likelihood ratio and Pearson chi-square values of 498.91 and 1074.13 respectively with 3984 degrees of freedom.

In the goodness-of-fit test statistics, each chi-square had an observed significance level of $P = 1.000$. This value was used to test the null-hypothesis that "the observed significance level of all higher-order interactions or effects of the model was 0"; (in this case, we were to test that the 3rd., 4th. and 5th. order effects were 0). If the $P\text{-value} < 0.05$, then we would have rejected the null-hypothesis, meaning that there must have still been other relevant higher-order interactions which needed to be included in the model. Otherwise, as in this case, the null-hypothesis could not be rejected¹⁷. Thus we concluded by stating *"it appeared that a model with first and second-order effects alone (or interactions) were adequate to represent the data"*.

Design 1B :-

```
-> hiloglinear asnprcn(1,6) mthinc sposinc(1,7) occpn1(1,4) occpn2(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnprcn*mthinc*sposinc*occpn1*occpn2.
```

***** HIERARCHICAL LOG LINEAR *****

DATA	Information
------	-------------

293	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
282	cases rejected because of missing data.
293	weighted cases will be used in the analysis.

¹⁷ Note that in step 15, although the P-value was indeed greater than 0.05, there still remained interactions that needed to be eliminated, hence the on-going iterations.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
MTHINC	7	Average monthly income
SPOSINC	7	Spouse average monthly income
OCCPN1	4	Occupation
OCCPN2	3	Which sector?

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*MTHINC*SPOSINC*OCCPN1*OCCPN2

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
MTHINC*OCCPN1	18	58.014	.0000	2
MTHINC*SPOSINC	36	76.826	.0001	4
MTHINC*OCCPN2	12	24.999	.0148	2
ASNPRCN*SPOSINC	30	54.882	.0037	4
OCCPN1*OCCPN2	6	143.630	.0000	2

Step 22 : The final model has generating class

MTHINC*OCCPN1
MTHINC*SPOSINC
MTHINC*OCCPN2
ASNPRCN*SPOSINC
OCCPN1*OCCPN2

Goodness-of-fit test statistics :

Likelihood ratio chi square = 438.24003 DF = 3403 P = 1.000
Pearson chi square = 864.77975 DF = 3403 P = 1.000

Comments :

For every set of the independent factors identified in our hypothetical model, we had to design two hiloglinear models, each for the variables SHREVAL (total market value of shares owned by the respondents) and ASNPRCN (percentage of investments the respondents had in the stock market). These two variables could have been combined into one model, however the design would then be meaningless because the two variables were logically closely related. This has also been shown in the previous bivariate analysis. Besides, the design approach which used only one of the dependent variables at a time would enable us to include four other independent variables in one

model¹⁸. Hence, the approach was to use two separate hiloglinear models for each of the six factors being considered.

In Design 1A, the expectation was to observe a model with a generating class SHREVAL*MTHINC*SPOSINC. This would have indicated that the respondents amount of investment in stocks was closely related to their household income. However, the results did not turn out to be so. Among others, the final model had the generating class SHREVAL*MTHINC and SHREVAL*SPOSINC. The plausible reason was probably the relatively small number of responses recorded in SPOSINC. Hence, there could have been be a large number of empty-cells which would have ruled out any significant interaction.

However, in Design 1B it was even more surprising to see the absence of the interaction ASNPRCN*MTHINC. Instead, only the two-way effects of ASNPRCN*SPOSINC appeared. Nevertheless, this seemed to be consistent with the previous results obtained from the bivariate analysis. Finally, despite the absence of the three-way effects, the two designs had at least indicated the relevance of household income variables (MTHINC and SPOSINC) in relation to the respondents' level of participation in stock market investment.

10.3.2 The independent factor, X₂ (consumption and savings attitudes).

The initial variables identified to represent this factor were AGE, DEPNDNT, YRSWRK, MARITAL, SVPRCN and SVTOTAL, the last two representing the respondents' savings attitudes. As there were too many variables to be included in one model, we decided to separate savings and consumption variables.

¹⁸ Recall that, optimally, we could only have five variables in the hiloglinear model design, at any one iterative process.

Results :

Design 2A :-

```
-> hiloglinear shreval(1,7) age(1,5) yrswrk(1,4) marital(1,4) depndnt(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*age*yrswrk*depndnt*marital.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

400	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
175	cases rejected because of missing data.
400	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
SHREVAL	7	Average market value of all shares
AGE	5	Age
YRSWRK	4	No. of Years working
MARITAL	4	Marital Status
DEPNDNT	3	Dependants

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*AGE*YRSWRK*MARITAL*DEPNDNT

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
AGE*MARITAL	12	57.486	.0000	5
SHREVAL*AGE	24	55.066	.0003	5
AGE*YRSWRK	12	332.368	.0000	2
AGE*DEPNDNT	8	24.522	.0019	2
YRSWRK*DEPNDNT	6	16.614	.0108	2

Step 22 : The final model has generating class

AGE*MARITAL
SHREVAL*AGE
AGE*YRSWRK
AGE*DEPNDNT
YRSWRK*DEPNDNT

Goodness-of-fit test statistics

Likelihood ratio chi square = 201.79136 DF = 1599 P = 1.000
Pearson chi square = 285.24309 DF = 1599 P = 1.000

Design 2B :-

```
-> hiloglinear asnprcn(1,6) age(1,5) yrswrk(1,4) marital(1,4) depndnt(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnprcn*age*yrswrk*depndnt*marital.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

404	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
171	cases rejected because of missing data.
404	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
AGE	5	Age
YRSWRK	4	No. of Years working
MARITAL	4	Marital Status
DEPNDNT	3	Dependants

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*AGE*YRSWRK*MARITAL*DEPNDNT

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
AGE*MARITAL	12	58.716	.0000	5
AGE*YRSWRK	12	324.781	.0000	2
AGE*DEPNDNT	8	24.977	.0016	2
YRSWRK*DEPNDNT	6	16.072	.0134	2
ASNPRCN	5	92.431	.0000	5

Step 23 : The final model has generating class

AGE*MARITAL
AGE*YRSWRK
AGE*DEPNDNT
YRSWRK*DEPNDNT
ASNPRCN

Goodness-of-fit test statistics

Likelihood ratio chi square = 207.45969 DF = 1384 P = 1.000
Pearson chi square = 259.15315 DF = 1384 P = 1.000

Comments :

As in the previous designs, the initial step examined the fifth-order interactions and continued its iterations until it reached the best possible design which fulfil the selection criterion set earlier.

In Design 2A, the final model did not show any significant interactions other than a two-way effects of the variables. The variable SHREVAL interaction was only relevant against another variable AGE.

In Design 2B, the variable ASNPRCN did not pair with any of the others. Although both results were again consistent with our previous findings, it did not allow us to conclude whether the respondents' participation in the stock market had any relevance or interaction with their personal background. We then constructed two other designs to include SVPRCN and SVTOTAL against the dependent variables. As expected, both of them showed strong interactions with SHREVAL and ASNPRCN.

10.3.3 The independent factor, X_3 (investment's attitude).

There were five variables designed as indicators of the respondents' investment attitudes, namely, INVSPRCN, INVSTOTL, INVSTYP, IMPTINVS and INVCHR. However, only four variables were selected in the loglinear model design, excluding the variable INVCHR (which measured the respondents' investment characteristic such as long-term investors or short-term speculators). The latter was excluded because it had not shown any significant relationships at several different stages of our earlier analysis.

Results :

Design 3A :-

```
-> hiloglinear shreval(1,7) invsprcn(1,4) invstotl(1,7) invstyp(1,6) imptinvs(1,8)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*invsprcn*invstotl*invstyp*imptinvs.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

399	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
176	cases rejected because of missing data.
399	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
SHREVAL	7	Average market value of all shares
INVSRCN	4	% of annual income invested
INVTOTL	7	Total value of investments now
INVTYP	6	Investment Type
IMPTINVS	8	Type of most important investment

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*INVSRCN*INVTOTL*INVTYP*IMPTINVS

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
INVTYP*IMPTINVS	35	122.089	.0000	6
INVTOTL*INVTYP	30	112.848	.0000	6
SHREVAL*IMPTINVS	42	66.171	.0101	5
INVTOTL*IMPTINVS	42	58.587	.0459	5
SHREVAL*INVTOTL	36	152.440	.0000	5
INVSRCN*INVTOTL	18	64.682	.0000	6

Step 21: The final model has generating class

INVTYP*IMPTINVS
INVTOTL*INVTYP
SHREVAL*IMPTINVS
INVTOTL*IMPTINVS
SHREVAL*INVTOTL
INVSRCN*INVTOTL

Goodness-of-fit test statistics

Likelihood ratio chi square = 875.10030 DF = 9177 P = 1.000
Pearson chi square = 2226.69013 DF = 9177 P = 1.000

Design 3B :-

-> hiloglinear asnprcn(1,6) invsprcn(1,4) invstotl(1,7) invstyp(1,6) imptinvs(1,8)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnprcn*invsprcn*invstotl*invstyp*imptinvs.

***** HIERARCHICAL LOG LINEAR *****

DATA Information

404 unweighted cases accepted.
0 cases rejected because of out-of-range factor values.
171 cases rejected because of missing data.
404 weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
INVSRCN	4	% of annual income invested
INVSTOTL	7	Total value of investments now
INVSTYP	6	Investment Type
IMPTINVS	8	Type of most important investment

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*INVSRCN*INVSTOTL*INVSTYP*IMPTINVS

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
INVSTYP*IMPTINVS	35	124.065	.0000	4
INVSTOTL*INVSTYP	30	117.123	.0000	2
INVSTOTL*IMPTINVS	42	64.340	.0149	4
ASNPRCN*INVSTYP	25	49.413	.0025	6
ASNPRCN*INVSRCN	15	58.240	.0000	6
INVSRCN*INVSTOTL	18	66.291	.0000	6

Step 21 : The final model has generating class

INVSTYP*IMPTINVS
INVSTOTL*INVSTYP
INVSTOTL*IMPTINVS
ASNPRCN*INVSTYP
ASNPRCN*INVSRCN
INVSRCN*INVSTOTL

Goodness-of-fit test statistics

Likelihood ratio chi square = 895.70485 DF = 7872 P = 1.000
Pearson chi square = 2014.05355 DF = 7872 P = 1.000

Comments :

In Design 3A, the result showed partial effect interactions between the variables SHREVAL*IMPTINVS and SHREVAL*INVSTOTL. In bivariate analysis, the former was found not to be significantly related. The initial expectation was to observe a simple model of SHREVAL*IMPTINVS*INVSTYP. The generation of such a model would then permit us to infer the influence of the respondents' investment attitudes toward their stock market participation. However, all the models that have been generated so far have only shown the second-order effects. The interaction of SHREVAL*IMPTINVS implied that the respondents' total market value of shares was significantly related to the type of investments they regarded as most important. Likewise, there was also a significant relationship between their share values and overall investment total.

In Design 3B, the final model included the second-order interactions of ASNPRCN*INVSTYP and ASNPRCN*INVSPRCN. In other words, the percentage of the respondents' investment in the stock market was significantly related to (and had close interaction with) both their "choice of investments" and the "percentage of annual income being invested".

10.3.4 The independent factor, X₄ (educational background and appreciation of the stock market).

There were initially six variables identified to reflect the respondent's probable level of appreciation and understanding of the stock market. From these, two were excluded because of the presence of overlapping effects from the remaining four variables that were selected, namely SMKNWL, ASNBOBJ, EDUC and OCCPN2.

Results :

Design 4A :-

```
-> hiloglinear shreval smknwl(1,7) asnbobj(1,4) educ(1,6) occpn2(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*smknwl*asnbobj*educ*occpn2.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

416	unweighted cases accepted.
1	cases rejected because of out-of-range factor values.
158	cases rejected because of missing data.
416	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
SHREVAL	7	Average market value of all shares
SMKNWL	7	Knowledgable in stock market investment
ASNBOBJ	4	Understand ASN-ASB objectives?
EDUC	6	Education background
OCCPN2	3	Which sector?

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*SMKNWL*ASNBOBJ*EDUC*OCCPN2

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
SHREVAL*ASNBOBJ	18	31.225	.0271	2
EDUC*OCCPN2	10	38.101	.0000	2
SHREVAL*OCCPN2	12	29.983	.0028	2
SMKNWL	6	618.977	.0000	2

***** HIERARCHICAL LOG LINEAR *****

Step 24 : The final model has generating class

SHREVAL*ASNBOBJ
EDUC*OCCPN2
SHREVAL*OCCPN2
SMKNWL

Goodness-of-fit test statistics
Likelihood ratio chi square = 611.91164 DF = 3465 P = 1.000
Pearson chi square = 1910.84297 DF = 3465 P = 1.000

Design 4B :-

-> hiloglinear asnprcn(1,6) smknwl(1,7) asnbobj(1,4) educ(1,6) occpn2(1,3)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnprcn*smknwl*asnbobj*educ*occpn2.

***** HIERARCHICAL LOG LINEAR *****

DATA Information

421 unweighted cases accepted.
2 cases rejected because of out-of-range factor values.
152 cases rejected because of missing data.
421 weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
SMKNWL	7	Knowledgable in stock market investment
ASNBOBJ	4	Understand ASN-ASB objectives?
EDUC	6	Education background
OCCPN2	3	Which sector?

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*SMKNWL*ASNBOBJ*EDUC*OCCPN2

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
ASNPRCN*SMKNWL	30	43.428	.0537	2
EDUC*OCCPN2	10	39.758	.0000	2
ASNBOBJ	3	500.512	.0000	2

Step 25 : The final model has generating class

EDUC*OCCPN2
ASNBOBJ
ASNPRCN
SMKNWL

Goodness-of-fit test statistics
Likelihood ratio chi square = 640.48085 DF = 2992 P = 1.000
Pearson chi square = 2095.71322 DF = 2992 P = 1.000

Comments :

In Design 4A, the backward elimination took twenty-four steps before arriving at the final model. Among others, the result showed two-way interactions of SHREVAL*ASNBOBJ and SHREVAL*OCCPN2. It was interesting to note that the variable SMKNWL (which measured the respondents' level of knowledge of the stock market) did not seem to have any significant interaction at all with SHREVAL. This was in conflict with an earlier bivariate test results which indicated a positive correlation between the level of knowledge of the stock market and the total value of shares invested. (See table 9.10 of chapter 9).

On the other hand, the interaction of SHREVAL*OCCPN2 implied that there existed a significant relationship between the respondents' employment sector and their investment in shares. However, this could be related to income as well because those working in the private sector were presumably earning more than the others. Lastly, in Design 4B the final model did not include any two-way effects against the variable ASNPRCN, again showing the independence of the variable SMKNWL.

10.3.5 The independent factor, X_5 (attitude towards risk).

Apart from the two variables SMRISKY and SMSPEC, we have also selected two other variables used earlier in part three, namely the IMPTINVS and INVSTYP. Their inclusion was based on the assumption that the respondents' choice of investments, and the type they regarded as most important, would presumably reflect their attitudes toward risk in investment.

Results :

Design 5A :-

```
-> hiloglinear shreval(1,7) imptinvs(1,8) smrisky smspec(1,4) invstyp(1,6)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*imptinvs*smrisky*smspec*invstyp.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

404	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
171	cases rejected because of missing data.
404	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
SHREVAL	7	Average market value of all shares
IMPTINVS	8	Type of most important investment
SMRISKY	4	Stock Market is too risky for investment
SMSPEC	4	Stock Market is for speculative short-term investment
INVSTYP	6	Investment Type

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*IMPTINVS*SMRISKY*SMSPEC*INVSTYP

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
IMPTINVS*INVSTYP	35	151.341	.0000	2
SHREVAL*IMPTINVS	42	60.937	.0295	2
SHREVAL*INVSTYP	30	47.018	.0248	2
SHREVAL*SMSPEC	18	34.956	.0096	6
SMRISKY*SMSPEC	9	57.876	.0000	6

Step 22 The final model has generating class

IMPTINVS*INVSTYP
SHREVAL*IMPTINVS
SHREVAL*INVSTYP
SHREVAL*SMSPEC
SMRISKY*SMSPEC

Goodness-of-fit test statistics

Likelihood ratio chi square = 560.73563 DF = 5217 P = 1.000
Pearson chi square = 1125.30926 DF = 5217 P = 1.000

Design 5B :-

```
-> hiloglinear asnprcn(1,6) imptinvs(1,8) smrisky smspec(1,4) invstyp(1,6)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnprcn*imptinvs*smrisky*smspec*invstyp.
```

***** HIERARCHICAL LOG LINEAR *****

DATA Information

410	unweighted cases accepted.
0	cases rejected because of out-of-range factor values.
165	cases rejected because of missing data.
410	weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
IMPTINVS	8	Type of most important investment
SMRISKY	4	Stock Market is too risky for investment
SMSPEC	4	Stock Market is for speculative short-term investment
INVSTYP	6	Investment Type

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*IMPTINVS*SMRISKY*SMSPEC*INVSTYP

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
IMPTINVS*INVSTYP	35	144.190	.0000	2
ASNPRCN*INVSTYP	25	50.185	.0020	2
SMRISKY*SMSPEC	9	63.151	.0000	2

Step 24 : The final model has generating class

IMPTINVS*INVSTYP
ASNPRCN*INVSTYP
SMRISKY*SMSPEC

Goodness-of-fit test statistics

Likelihood ratio chi square = 641.16625 DF = 4515 P = 1.000
Pearson chi square = 1947.51214 DF = 4515 P = 1.000

Comments :

The result in Design 5A was expected. The elimination of all three-way effects confirmed that the first and second-order effects of the models were sufficient enough to represent the data. Apart from seeing the same result for SHREVAL*IMPTINVS as in the earlier Design 3A, there were also two other interactions SHREVAL*INVSTYP and SHREVAL*SMSPEC. Note that although the variable INVSTYP was included in Design 3A, the interaction with SHREVAL did not appear there. We suspected that the presence of other variables had suppressed its interaction strength.

Finally, the model in Design 5B only showed the relevance of ASNPRCN*INVSTYP. Based on the results obtained in both the designs above, we conclude that, to the extent the variables used were able to reflect the respondents preference of investment type or attitudes toward risk, there were no reason to believe that the latter had any influence on the respondents' level of participation in stock market investment.

10.3.6 The independent factor, X_6 (level of religious conscience).

In the final design, only three variables were selected to test whether the respondents' level of religious conscience had any influence on their level of involvement in stock market investment. The variables selected were SMOPN, SMRLGN and SMISLAM.

Results :

Design 6A :-

```
-> hiloglinear shreval(1,7) smrlgn smislam smopn(1,4)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=shreval*smrlgn*smislam*smopn.
```


***** HIERARCHICAL LOG LINEAR *****

DATA Information

416 unweighted cases accepted.
0 cases rejected because of out-of-range factor values.
159 cases rejected because of missing data.
416 weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
SHREVAL	7	Average market value of all shares
SMRLGN	4	Religion deters Muslims from investing in S-M
SMISLAM	4	More Muslims would invest in Islamic S-M
SMOPN	4	Religious opinion on the stock market

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

SHREVAL*SMRLGN*SMISLAM*SMOPN

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
SHREVAL*SMRLGN	18	30.375	.0340	2
SMRLGN*SMISLAM	9	25.006	.0030	2
SMOPN	3	600.782	.0000	2

Step 10 : The final model has generating class

SHREVAL*SMRLGN
SMRLGN*SMISLAM
SMOPN

Goodness-of-fit test statistics

Likelihood ratio chi square = 220.25406 DF = 405 P = 1.000
Pearson chi square = 268.17736 DF = 405 P = 1.000

Design 6B :-

-> hiloglinear asnpn(1,6) smrlgn smislam smopn(1,4)
-> /method=backward
-> /criteria=delta(0) maxsteps(25)
-> /print=estim
-> /design=asnpn*smrlgn*smislam*smopn.

***** HIERARCHICAL LOG LINEAR *****

DATA Information

422 unweighted cases accepted.
0 cases rejected because of out-of-range factor values.
153 cases rejected because of missing data.
422 weighted cases will be used in the analysis.

FACTOR Information

Factor	Level	Label
ASNPRCN	6	% of investments in the stock market
SMRLGN	4	Religion deters Muslims from investing in S-M
SMISLAM	4	More Muslims would invest in Islamic S-M
SMOPN	4	Religious opinion on the stock market

***** HIERARCHICAL LOG LINEAR *****

Backward Elimination (p = .050) for DESIGN 1 with generating class

ASNPRCN*SMRLGN*SMISLAM*SMOPN

If Deleted Simple Effect is	DF	L.R. Chisq Change	Prob	Iter
SMRLGN*SMOPN	9	17.129	.0467	2
SMRLGN*SMISLAM	9	25.481	.0025	2
ASNPRCN	5	83.377	.0000	2

Step 10 : The final model has generating class

SMRLGN*SMOPN
SMRLGN*SMISLAM
ASNPRCN

Goodness-of-fit test statistics

Likelihood ratio chi square = 180.98856 DF = 351 P = 1.000
Pearson chi square = 252.70382 DF = 351 P = 1.000

Comments :

Apart from the second-order effects of SHREVAL*SMRLGN, both the designs in 6A and 6B did not indicate any significant interactions at all between the respondents' level of investment in shares and their religious conscience. The results confirmed all earlier bivariate tests conducted on the sample data whereby the religious consciousness of the sample group appeared to be independent of their attitude towards investing in the stock market.

10.4 Concepts of Factor Analysis

10.4.1 Definition and Limitations

Factor analysis may be defined as a statistical procedure that involves a mathematically complex method of reducing a large set of variables to a much smaller representative set of underlying variables referred to as factors¹⁹. The technique identifies a relatively small number of factors that can be used to represent relationships among the sets of interrelated variables. The object of factor analysis is to discover the essential underlying dimensions which could help explain complex phenomena, summarising information from the original large variables set into a simple and more comprehensible form. In the context of our study, the aim would be to examine whether, on the basis of the respondents' answers to the survey questions, a smaller set of common factors underlying the responses to individual question could be identified.

Thus from the seventy-two variables created, we could for example select certain sets of variables that best represent the opinions of the respondents on investment participation in the stock market, and analyse them through the SPSS Factor Analysis procedure. This will help us identify any inherent patterns in the overall set of responses, which will then shed further light on the position of the hypothetical model suggested.

To this ends, the statistical tool seemed to be the most appropriate for the analysis. However, some authors²⁰ emphasise that the method is only appropriate for scale development when you have a set of interval-level, non-dichotomous variables. This poses a problem because none of the variables involved in our sample data have

¹⁹ See Child (1970), Jaeger (1990 : p. 371) and De Vaus (1993 : p.257).

²⁰ See De Vaus (1993) and Bryman (1990).

been measured at the interval level. They were either nominal or ordinal variables. Further, a dichotomous variable is usually thought of as a nominal variable, though sometimes it can also be considered an ordinal variable, especially in cases where there exists an inherent ordering to the dichotomy.

Since it is often very difficult for researchers to gather an "all interval-level" measurement in a social survey, some of them have treated these ordinal variables (of multiple-item measures) as though they were interval variables because these measures permit a large number of categories to be stipulated. However, those who disagreed with such an assumption would demur from this position. Thus we performed the Factor Analysis procedure keeping in mind the constraints in the nature of variables involved in our sample data. As such, the inferences drawn from the results were treated with extreme caution in order to avoid any bias in interpretation.

10.4.2 Steps in Factor Analysis

Basically there are four main steps involved in the mechanics of factor analysis. At each of these steps, there is a variety of techniques to choose from that will still achieve the same results. However, we shall only describe one of the main methods commonly used. The four steps involved were²¹ :

1. Selection of variables to be factor analysed;
2. Extraction of an initial set of factors;
3. Extraction of a final set of factors by "rotation"; and finally
4. Construction of scales and computation of scores for each factor to be used in a variety of other analyses.

²¹ See De Vaus (1993 : p. 254) and Norusis (1990a : p. 151).

We shall however confine our discussion (and description of the SPSS results) to the first three steps. The fourth step is omitted because the objective of this exercise is *exploratory* rather than *confirmatory*²². Exploratory factor analysis is the kind in which the relationships among the many variables are examined without determining the extent to which the results fit a particular model. On the other hand, confirmatory factor analysis compares the solutions found against a hypothetical one. In other words, had our variables been measured at the interval level, the confirmatory analysis would have been more appropriate because it would then enable us to confirm or otherwise our earlier model. Although there are techniques for making these statistical comparisons²³, the option is beyond the scope of our study.

10.5 Procedure FACTOR - Descriptions, Results and Analysis.

10.5.1 Step 1 : Selection of variables to be factor analysed.

The initial step involves computation of a correlation matrix for a selection of variables selected from the original set. Although in some cases the computation may include all the variables in the sample, it is not always necessary to do so. In this case, a subset of the seventy-two variables were carefully identified and selected to represent the relevant components of the factors under study. Variables that were not related to other variables were then identified from the correlation matrix and its associated statistics. If there appears to be no significant correlation between these variables, it means that they are not related and we would not expect them to form one or more factors. In other words, if the correlation between the variables were small, it would be

²² See Bryman (1990).

²³ See Long (1983); Joreskog and Sorbom (1986).

unlikely for them to share any common factor, and thus it would not be worthwhile to proceed in conducting a factor analysis.

Since one of the goals of factor analysis is to obtain *factors* that help explain these correlations, it is important to ensure that the variables to be analysed have at least a reasonable correlation level. In our case, we began by selecting about forty variables from the original seventy-two in the sample. We then produced several correlation matrices through computer trial-runs to select variables which were relatively strongly correlated (about 0.4 in absolute value), and discarded those which were found not to be statistically significant. In the final analysis, of the forty variables, only twenty-two remained to be factor analysed²⁴.

There are in fact a number of more systematic ways that can be employed to determine whether a set of variables in a correlation matrix is suitable for factor analysis. Among the most commonly used statistical measures are the *Kaiser-Meyer-Olkin* (KMO) measure of sampling adequacy and the *Bartlett test of sphericity*. Both these tests could be used by a simple command within the "Print-procedure" as follows:

```
-> factor variables= mthinc sposinc  
->          svprcn svttotal age depndnt yrswrk  
->          smrlgn smislam smopn  
->          smspec smrisky  
->          invstyp imptinvs invsprcn invstotl  
->          asnbobj smimpt smknwl educ occpn1 occpn2  
-> /print=correlation kmo aic.
```

Results :

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .69932

Bartlett Test of Sphericity = 1111.3060, Significance = 0.00000

²⁴ Since the various print-outs of the correlation matrices were too large to be included, it was felt that disclosing the KMO's index and the Bartlett test results would be sufficient to explain the process.

Analysis :

The print-command within the Factor procedure above requested a print-out of the correlation matrix of all the twenty-two variables, the KMO measures (which included the Bartlett test measure) and the anti-image correlation matrix. We shall begin by explaining the results of the Bartlett's test of sphericity and its associated significance level. At the outset, this test required the sample data to come from a multivariate normal population.

As mentioned earlier, it is often difficult to determine whether the set of variables in a correlation matrix is suitable for factor analysis, especially when the number of variables involved is very large. The sufficient condition requires that the variables within the matrix set have an "adequate level" of correlation among themselves before the Factor procedure could be (appropriately) employed. We used the hypothesis testing to determine this adequacy level. The Bartlett's test of sphericity was then used to test the null-hypothesis "that the population correlation-matrix was an identity-matrix". This is a matrix where all the diagonal terms are 1 and the remaining off-diagonal terms are 0. At the extreme end, if the matrix is indeed an identity-matrix, then it implies that there is no correlation among any of the variables within the matrix set, and thus it would not be relevant to conduct factor analysis.

The acceptance or rejection of the null-hypothesis is therefore dependent on the size of the significance level associated with the value of the *test statistic for sphericity*. This is in fact based on a chi-square transformation of the determinant of the correlation matrix²⁵. If the null-hypothesis cannot be rejected due to a large observed significance level (say $p > 0.05$), then we should reconsider the use of the factor model. In this case, the result showed a significance level of 0.000; therefore we rejected the null-hypothesis

²⁵ The computation of the Bartlett test of sphericity is beyond the scope of our discussion but it is relevant to observe the level of significance associated with its value.

"that the population correlation matrix is an identity-matrix". This implied that we could proceed to conduct factor analysis on the variables.

On the other hand, the KMO measure of sampling adequacy was an index that compared the magnitudes of the observed correlation coefficients to the magnitudes of the partial correlation coefficients. This index was computed as follows²⁶ :

$$KMO = (\sum \sum r_{ij}^2) / (\sum \sum r_{ij}^2 + \sum \sum a_{ij}^2)$$

where r_{ij} and a_{ij} were the simple and partial correlation coefficients between variables i and j , respectively. Notice that if the summation value of a_{ij} were small relative to r_{ij} , the KMO measure would tend to approach 1.0. Indeed, the KMO measure ranges from 0 to 1. In general, if the measure is small, it implies that the level of correlations between pairs of variables in the matrix set may not be adequate for factor analysis to be conducted. Most authors agreed that if the statistic yields high values above 0.7, then the correlations on the whole are sufficiently high to make factor analysis suitable. More care should be taken if they lie between 0.5 and 0.69, and KMO values below 0.5 mean that factor analysis would be inappropriate for that set of variables²⁷. The result of our KMO measure was 0.69932 which is almost the middling value of 0.70. Thus taken together with the Bartlett's test result, we should feel comfortable to proceed with the factor analysis.

10.5.2 Step 2 : Extraction of an initial set of factors.

The next step involves the extraction of an initial set of factors. There are several techniques that could be employed in extracting these factors. Kim and Mueller (1978a and 1978b) discuss these alternatives. The two most widely used forms of factor

²⁶ See Norusis (1990a : p. 153).

²⁷ Kaiser (1974) characterises measures in the 0.9's as marvellous, 0.8's as meritorious, 0.7's as middling, 0.6's as mediocre, 0.5's as miserable and below 0.5 as unacceptable.

analysis are the *principal-components analysis* and the *principal-axis factoring*. The difference between these two methods lies essentially in how they handle unique variance among the variables in the selected set.

In essence, factor analysis is primarily concerned with describing the variation or variance shared by the scores of respondents on a group of variables. The total variance of a test consists of its common variance and its unique variance. In principal-components analysis all the variance of a variable is being analysed, while in the principal-axis factoring only the common variance is examined. The proportion of variance accounted for by the common factors is known as the *communality* of a variable. In the initial phase of the factor-procedure, each variable has a communality value of 1. Since there were twenty-two variables involved in our analysis and each variable has been standardised to have a variance of 1.00000, the total variance in column 2 (Communality) of Table 10.1 would add up to 22.00000. (Note : the five decimal places are standard features of the computer print-out).

In extracting factors, we had to decide on the followings : firstly, on a particular method of extraction, and secondly, on the number of factors to be extracted. In this study, we have chosen the principal-components method due to its inclusion of both the common and unique variances. In determining the number of factors to be extracted, it is important to realise that the aim of factor analysis is to represent a set of variables as simply as possible. Thus the best factor analysis would be the one with as few factors as necessary. Initially, factor analysis will create as many factors as there are variables, however many of these are often meaningless. Besides, if all variables were included in the analysis, nothing would have been gained since there would be as many factors (or principal-components) as there were variables.

The SPSS procedure that has been used to extract the initial set of relevant factors was as follows :

```
-> factor variables= mthinc sposinc
->          svprcn svtotal age depndnt yrswrk
->          smrlgn smislam smopn
->          smspec smrisky
->          invstyp imptinvs invsprcn invstotl
->          asnbobj smimpt smknwl educ occpn1 occpn2.
```

Results :

```
----- FACTOR ANALYSIS -----
Analysis number 1 Listwise deletion of cases with missing values
Extraction 1 for analysis 1, Principal Components Analysis (PC)
Initial Statistics :          PC extracted 8 factors
```

Table 10.1
Initial Extraction of Relevant Factors using SPSS command FACTOR²⁸

Variable 1	Communality 2	Factor 3	Eigenvalue 4	Pct of Var 5	Cum Pct 6
MTHINC	1.00000	1	3.59155	16.3	16.3
SPOSINC	1.00000	2	1.98062	9.0	25.3
SVPRCN	1.00000	3	1.85398	8.4	33.8
SVTOTAL	1.00000	4	1.39214	6.3	40.1
AGE	1.00000	5	1.29674	5.9	46.0
DEPNDNT	1.00000	6	1.17835	5.4	51.3
YRSWRK	1.00000	7	1.09449	5.0	56.3
SMRLGN	1.00000	8	1.02762	4.7	61.0
SMISLAM	1.00000	9	0.96027	4.4	65.3
SMOPN	1.00000	10	0.90765	4.1	69.5
SMSPEC	1.00000	11	0.86435	3.9	73.4
SMRISKY	1.00000	12	0.77037	3.5	76.9
INVSTYP	1.00000	13	0.74891	3.4	80.3
IMPTINVS	1.00000	14	0.69699	3.2	83.5
INVSPRCN	1.00000	15	0.63750	2.9	86.4
INVSTOTL	1.00000	16	0.60945	2.8	89.1
ASNBOBJ	1.00000	17	0.58378	2.7	91.8
SMIMPT	1.00000	18	0.50718	2.3	94.1
SMKNWL	1.00000	19	0.42084	1.9	96.0
EDUC	1.00000	20	0.31386	1.4	97.4
OCCPN1	1.00000	21	0.29640	1.3	98.8
OCCPN2	1.00000	22	0.26697	1.2	100.0

KEY TO VARIABLES : (common for tables 10.2 and 10.3)

OCCPN1 - Occupation

OCCPN2 - Occupation sector

MTHINC - Monthly income

SPOSINC - Spouse income

SVPRCN - % of income save

SVTOTAL - Savings total

INVSPRCN - % of annual income invested

INVSTOTL - Investments total

AGE - Age

²⁸ Note that this table was obtained after a series of computer runs with wide ranging eigenvalues and total variance distribution. The objective was to identify and select the least number of factors with the largest percentage of explained variance.

DEPNDNT - Dependants	YRSWRK - Years worked	EDUC - Education
SMKNWL - Knowledge of the stock market	ASNBOBJ - Knowledge of ASN/B objectives	
SMIMPT - Stock market is important	IMPTINVS - Important investments	
SMRISKY - Stock market is risky	SMSPEC - Stock market is for speculative investments	
SMRLGN - Religion deters shares investments	SMISLAM - Muslims would invest in Islamic shares	
SMOPN - Religious opinion on the stock market	INVSTYP - Types of investments held	

In deciding the number of factors needed to represent the data, it is useful to examine the percentage of total variance explained by each factor. This is listed in column 4 of table 10.1 above, under a statistical measure called *eigenvalue*. The higher this value, the more variance it accounts for²⁹. The next column in the table, column 5, shows the percentage of the total variance attributable to each factor, and finally column 6 indicates the cumulative percentage of the variance. Notice that the factors have been arranged in descending order of the variance each explained. Also note that although the "variable" names and "factors" have been displayed parallel to each other, there was no relation between them or between the two halves of the table. The first two columns provided information about the individual variables, while the last four columns described the factors. Thus, for example, Factor 2 had a variance of 1.98062 which constituted 9.0% of the total variance of 22.00000 from the initial 22 factors. The table also shows that 61% of the total variance was attributable to the first eight factors. The remaining fourteen factors only accounted for about 39% of the variance. Hence a model with eight factors seemed to be adequate to represent the data.

Several procedures have been proposed in determining the number of factors to be retained in a model. The most common suggestion is to retain only factors with eigenvalues greater than 1.0³⁰. Based on this guideline, the SPSS procedure produced the final statistics as found in table 10.2 below.

²⁹ In other words, the eigenvalue of a factor is the amount of variance in all the variables that is explained by that factor.

³⁰ Another technique suggested the use of a graphical method called a scree-plot. For further explanation of both these techniques, see Norusis (1990a : p. 155) and De Vaus (1993 : p. 261). Other methods for deciding the number of factors to be kept are discussed in Kim and Mueller (1978a).

Table 10.2
Final Statistics of Factor Extraction using SPSS command FACTOR

Variable 1	Communality 2	Factor 3	Eigenvalue 4	Pct of Var 5	Cum Pct 6
MTHINC	0.69826	1	3.59155	16.3	16.3
SPOSINC	0.46175	2	1.98062	9.0	25.3
SVPRCN	0.67174	3	1.85398	8.4	33.8
SVTOTAL	0.57035	4	1.39214	6.3	40.1
AGE	0.76756	5	1.29674	5.9	46.0
DEPN DNT	0.58199	6	1.17835	5.4	51.3
YRSWRK	0.77421	7	1.09449	5.0	56.3
SMRLGN	0.67957	8	1.02762	4.7	61.0
SMISLAM	0.59790				
SMOPN	0.44065				
SMSPEC	0.52814				
SMRISKY	0.57278				
INVSTYP	0.40994				
IMPTINVS	0.58980				
INVSPRCN	0.65584				
INVSTOTL	0.58862				
ASNBOBJ	0.55491				
SMIMPT	0.53558				
SMKNWL	0.55407				
EDUC	0.69323				
OCCPN1	0.75714				
OCCPN2	0.73147				

Final Statistics : PC extracted 8 factors Eigenvalues > = 1.00000

Analysis :

Once the number of factors had been determined, a factor matrix was produced for the factors that had qualified for further analysis. This factor matrix (not shown here) gave the correlation coefficients (also known as *factor loadings*) between each of the twenty-two variables and the eight factors. The total weight of the factor loadings (from the eight factors) corresponding to each of the variables was then summed up and displayed as the new communality in column 2 of table 10.2.

Notice that the values of communalities were no longer 1.0. This is because not all the variances of the variables were explained when only a subset of the factors was retained (in this case, eight out of twenty-two). The values of communalities here reflected the proportion of variances explained by the common factors after the decided number of factors had been extracted. For example, for the first variable MTHINC in

table 10.2, the total percentage of variance of this variable that accounted for our eight-factor model was 69.8%, while for SPOSINC it accounted for almost 46.2% and so on.

In summary, the factor extraction phase involved the task of determining the number of common factors needed to adequately describe the data. The decision in selecting the number of factors was based on the eigenvalues (of ≥ 1.0) and the percentage of total variance accounted for, by different set of factors. The SPSS FACTOR analysis conducted above had identified eight factors that constituted 61% of the total variance of twenty-two. The next stage involves the process of extracting the final set of factors by the rotation phase.

10.5.3 Step 3 : Extraction of a final set of factors by "rotation"

Although we have identified the number of factors to be included in our analysis, the initial extraction did not identify which variables belong to which factors. In order to transform the factors into a more interpretable form, we need to proceed to a third phase called *factor rotation*. In an otherwise unrotated factor matrix, many variables will tend to "load" on several factors, and some factors will have almost every variable loading on them. This will make the results very difficult to interpret. The rotation phase of factor analysis will overcome this problem and help to identify factors that are substantively meaningful (in the sense that they summarise sets of closely related variables), making it easier for us to interpret and infer each of the underlying factors.

There are several methods of rotation that can be used in rotating variables. Generally, they are either of the *orthogonal* or *oblique rotation* methods³¹. Within the orthogonal form, there are a variety of algorithms that can be used to transform the

³¹ See Kim and Mueller (1978b) for a discussion of the concept of rotation and the differences between the various methods.

matrix to a single structure such as *varimax*, *quartimax* or *equamax*. The most commonly used method is the *varimax* which attempts to minimise the number of variables that have high loading on a factor. This will enhance further the interpretability of the factors.

Finally, in grouping these variables together to a common factor, it is helpful to determine the level of loadings of each of the variables we wish to include in our analysis. One way of doing this is through a graphical plotting of the loadings. Another convenient strategy is to sort the factor pattern matrix so that only variables with high loadings on the same factor will converge while the smaller loads will be omitted from the matrix. We chose the latter.

The following FACTOR procedure used *varimax* as the rotation method and set a minimum factor loading of 0.45 for inclusion :

```
-> factor variables= mthinc sposinc  
->          svpren svtotal age depndnt yrswrk  
->          smrlgn smislam smopn  
->          smspec smrisky  
->          invstyp imptinvs invspren invstotl  
->          asnbobj smimpt smknwl educ occpn1 occpn2  
-> /format=sort blank (0.45)  
-> /rotation=varimax.
```

Results :

----- FACTOR ANALYSIS -----

VARIMAX rotation 1 for extraction 1 in analysis 1 - Kaiser Normalization.

VARIMAX converged in 9 iterations.

Rotated Factor Matrix :

Table 10.3
Final Set of Factors Extracted by the Varimax Rotation Method

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
OCCPN2	- 0.79933							
OCCPN1	- 0.79314							
MTHINC	0.63189							
SPOSINC	0.46390							
SVPRCN		0.81156						
INVSPRCN		0.76964						
SVTOTAL		0.61188						
INVSTOTL		0.54240						
AGE			0.85596					
YRSWRK			0.84706					
DEPN DNT			0.60696					
EDUC				0.79484				
SMKNWL					0.68236			
ASNBOBJ					0.60822			
SMIMPT					0.52894			
IMPTINVS						0.74109		
SMRISKY						0.63952		
SMSPEC						0.46006		
SMRLGN							0.70834	
SMISLAM							0.68204	
SMOPN								0.64263
INVSTYP								-0.51102

Analysis :

At the outset, it is important to appreciate that the objective of an exploratory factor analysis conducted in this study is to examine whether a smaller number of common factors can account for the pattern of correlations in a larger number of variables. The aim is to determine the common factors which could have influenced the respondents attitudes toward savings and investment in the capital market of Malaysia. This will then enable us to infer upon the financial position and equity ownership issues of the Bumiputera Muslims population in the country.

From an original set of seventy-two variables, the SPSS FACTOR procedure has been able to identify a set of twenty-two variables that represented eight underlying common factors. The exploratory method however, did not determine the extent to which the results fit a particular model. Hence the aim of the analysis was to identify the inherent patterns in the overall set of responses, rather than comparing the results found

against the hypothetical model suggested earlier. Nevertheless, we found several interesting patterns in the results that seemed to reaffirm some of our earlier findings.

As previously mentioned, among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market were issues related to their (i) lack of investible financial resources, (ii) preference for investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) the impression that investing in stocks was equivalent to gambling and hence not permissible in Islam. Both the bivariate analysis and the hierarchical loglinear analysis conducted earlier produced mixed results, and taken on their own, each was inconclusive. However, a careful analysis of the variables underlying the eight factors produced in the final iteration of the factor analysis showed close resemblance to the various factors suggested in the hypothetical model.

Nevertheless, it is important to bear in mind that we have employed a procedure that was more appropriate for the interval-level variables rather than the nominal and ordinal-levels which were involved in the analysis. Hence, care was taken not to misinterpret our findings. We shall now identify the probable factors involved based on the combination of variables outlined in table 10.3

Factor 1 : Household income.

Variables : OCCPN2 - Occupation's sector; OCCPN1 - Occupation;

MTHINC - Monthly income; SPOSINC - Spouse income.

We suggested the first factor to be "household income" because the four variables involved seemed to describe a common factor related to it. The variables MTHINC and SPOSINC were more explicit in their relationships to household income than the other two variables on occupation. Note that both these two variables (on

occupation) had strong negative correlations to the factor. This is because the variables have been coded in the opposite direction to the other two³².

Among the eight factors identified, Factor 1 appeared to have the largest eigenvalue of 3.59155, contributing the largest percentage (16.3%) of the total variance explained. This indicated the significance of the factor in the overall result relative to the remaining seven factors. Notice that the factor loadings on these variables were also very large. The plausible reason for a relatively small factor loading for SPOSINC was a smaller percentage (about 66%) of responses to the question.

Factor 2 : Savings and Investment Patterns

Variables : SVPRCN - Percentage of monthly income saved; INVSPRCN - Percentage of annual income invested; SVTOTAL - Savings total; INVSTOTL - Investment total.

The four variables that constituted the underlying factor 2 were very distinct in their descriptions. They clearly denoted the respondents' savings and investment patterns. This factor explained 9% of the total variance with an eigenvalue of 1.98062. All the factor loadings for the four variables showed strong positive correlations to the factor.

Although it was not difficult to imagine why the four variables were closely related, a cross-reference to an earlier bivariate analysis revealed that these variables were also dependent on the respondents' monthly household income. Thus, it was not surprising to learn that when factors 1 and 2 were taken together, they would explain more than 25% of the total variance in the matrix.

³²For example, OCCPN1 has been coded in the descending order of status from "Professionals" to "Unemployed". As for OCCPN2, it was organised as "Private-sector", "Public-sector" and "Semi-government sector".

Factor 3 : Consumption pattern.

Variables : AGE; YRSWRK - Years worked; DEPNDNT - Number of dependants.

The three variables underlying factor 3 had among the highest factor loadings relative to most of the remaining nineteen variables. It had an eigenvalue of 1.85398 and helped to explain about 8.4% of the total variance of 22.0. We identified the factors as reflecting the "respondents' consumption pattern" rather than merely their "personal background" because the former was thought to be more relevant in the context of the model under study. Generally, the older a person gets, the longer he is assumed to have been employed, and the bigger is his number of dependants. Although this may not necessarily be true in all cases, the tendency for a person to increase his savings or investment normally tends to be positively correlated with his seniority. These factors would then affect his pattern and nature of consumption, hence the reason for choosing "consumption patterns" for factor 3.

In essence, the marginal propensity to save or invest as reflected in factor 2 was also closely related to factor 3, which in turn was apparently associated to factor 1. These three factors which accounted for almost 34% of the total variance seemed to converge on a single overriding factor, namely the respondents' net amount of money available for savings and/or investment.

Factor 4 : Education.

Variable : EDUC - Educational background.

Factor 4 had only a single variable associated with it, and the variable was strongly correlated with a factor loading of 0.79484. The percentage of explained variance started to drop significantly after factor 3. This factor had an eigenvalue of 1.39214 which accounted for 6.3% of the total variance. The factor explicitly

represented the respondents' level of education achievements, and perhaps it is best explained by relating the variable to the following factor 5.

Factor 5 : Knowledge and appreciation of the stock market.

Variables : SMKNWL - Knowledge of the stock market; ASNBOBJ - Knowledge of the ASN/B government's unit trusts; SMIMPT - Stock market as an important institution for resource mobilisation.

Apart from the variable SMIMPT, the other two variables were found to be significantly related to the respondents' level of investment in the stock market. Factor 5 contributed almost 6% to the total variance. However, if we assume that generally a person's ability to appreciate and understand the role and function of a stock market is positively related to his level of education, then factors 4 and 5 could be closely intertwined. As seen above, taken together these factors explained a significant 12.2% of the total variance.

Factor 6 : Risk attitude.

Variables : IMPTINVS - Type of investments regarded as important; SMRISKY - Stock market is too risky for investments; SMSPEC - Stock market is for speculative short-term investments.

Based on the questions posed for the three variables associated with factor 6, it was thought that the risk attitude of the respondents would best explained the underlying factor. Despite its small contribution of 5.4% to the total variance, the factor was still regarded as significant. Although such an analysis may not be able to explain the extent to which risk factor had influence the respondents' investment participation in the stock market, the fact that it has been identified as a factor was strong enough to reaffirm our earlier proposition of the hypothetical model.

Factor 7 : Opinion of religious influence

Variables : SMRLGN - Religion deters Muslims from investing in the stock market;
SMISLAM - More Muslims would invest in an Islamic stock market.

Factor 8 : Religious consciousness.

Variables : SMOPN - Religious opinion of the stock market; INVSTYP - Types of investments held.

The last two factors have been placed together because they were considered to be very closely related to one another. Similar to what had been found in factors 4 and 5 above, these two factors (the "respondents' opinion of religious influence" and their "religious conscience") seemed to relate to a common item. Together, the factors contributed about 10% to the total variance of the factor matrix and all the variables had relatively heavy factor loadings. The variable INVSTYP had a negative correlation due to an inverse coding against SMOPN. What it implied was that, the stronger the degree of religious consciousness in rejecting stock market participation, the more the tendency for the respondents' to choose other forms of investments (such as houses or land, etc.).

10.6 Conclusion

The objective of this chapter was to explore the possibility of drawing additional information from the respondents' responses in the survey questionnaire by employing some advanced statistical tools such as the Hierarchical Loglinear modelling and Factor analysis. The chapter discussed the broad concepts of these two SPSS procedures, followed by their results and analyses of the computer output.

The objective of employing the HILOGLINEAR procedure was to enable us to explore and uncover the potentially complex relationships among variables in

multidimensional crosstabulation tables. In situations involving two or three variables, the analysis of their crosstabulations could still be carried out either by the simple associations or elaboration techniques. However, when the analysis involves more than three dimensional tables, the number of possible relationships increases alarmingly, so much so that it would be almost impossible to unravel their significant interactions.

In conducting the HILOGLINEAR procedure, the initial expectation was that the models designed would generate some conclusive evidence on the abstract hypothetical theory suggested earlier. We also attempted to examine the relevance of the variables being used to test the hypothetical relationships between the respondents' level of stock market investment and the various independent factors, collectively. However in all the designs, the final models generated only the first and second-order effects. Since the observed significance levels were large for all the three-way effects, this confirmed that the first and second-order interactions were sufficient enough to represent or explain the relationships of the variables involved. As such, a simple conclusion could not be drawn without considering all other findings. Nevertheless, most of the results obtained seemed to reaffirm our previous bivariate analyses.

On the other hand, the basic aim of factor analysis was to examine whether on the basis of the respondents' answers to a large number of questions, a smaller set of some common factors that underlie these questions could be identified. Through the process of careful selection, removals, and several computer trial-runs, we managed to identify twenty-two relevant variables from an original set of seventy-two. These twenty-two variables explained 61% of the total variance of 22 in the varimax rotated factor matrix. The procedure also identified eight common underlying factors represented by the twenty-two variables and these have been described as the (i) household income; (ii) savings and investment patterns; (iii) consumption pattern; (iv) education level; (v) knowledge and appreciation of the stock market; (vi) risk attitude; (vii) opinion of religious influence and (viii) religious consciousness. These factors

seemed to correlate very closely with our hypothetical proposition put forth in chapter seven. However, the factor analysis conducted here was of the exploratory kind, in which the relationships between variables were examined without determining the extent to which the results were able to fit a particular model. It would require a confirmatory factor analysis to confirm our results against the model. This was not conducted because it would tend to stretch the assumptions on the nature of variables involved to their limit.

As indicated earlier, factor analysis is generally appropriate for scale development when you have a set of interval-level, non-dichotomous variables. In this study, we have treated the nominal and ordinal variables (of multiple-item measures) as possessing interval variables characteristics because these measures permit a large number of categories to be stipulated. Thus the inferences drawn need to consider such assumptions. In the final analysis, the validity of the results obtained through the FACTOR procedure rested upon the extent to which these assumptions could hold. In the next chapter, we shall conclude our study and summarise the overall findings of our statistical analyses based on all the SPSS procedures carried out in the previous three chapters.

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CHAPTER 11

SUMMARY AND CONCLUSIONS

11.1 Raison D'être for the Study

Malaysia is currently one of Asia's fastest growing economies, registering an average annual growth rate of more than 8.7% for the past seven consecutive years. The financial system and the capital market have also developed rapidly, in tandem with the growth in the economy. The Kuala Lumpur Stock Exchange has expanded from an insignificant component of the financial system into the largest bourse in South-East Asia with market capitalisation exceeding RM500 billion (£127.3 billion) at the end of 1994. The long term goal of Malaysia is to achieve the status of a developed country with full industrialisation by the year 2020 - a plan called *Vision 2020* by the ruling Government.

Apart from emphasising the importance of sustaining growth with price stability, the broad outline of *Vision 2020* includes an agenda to develop a Malaysian society that is democratic and caring, liberal and tolerant, progressive and prosperous, and most importantly, living in an environment that is economically just and equitable. Based on past experiences, the Government has recognised that sustained growth could only come about from a stable interplay of social, economic and political forces. Hence in a multi-ethnic country like Malaysia, socio-economic stability manifested through an equitable distribution of the nation's wealth has been considered a crucial policy in ensuring the continuity of both political and economic success.

Policies and efforts toward achieving these ends had been formulated as early as 1970 but formally took effect with the introduction of the *New Economic Policy* (NEP)

which spanned the twenty-year period between 1971 and 1990. The NEP was an exercise in social engineering designed to reduce the socio-economic imbalances among the ethnic groups. The primary aims of the policy were to promote economic growth with equity, eradicate poverty irrespective of race, restructure society to reflect a balanced employment pattern, and reduce the ethnic economic imbalance, all with the objective of fostering national unity within the plural society.

As outlined in the NEP, one of the strategies employed by the Government in order to achieve an equitable distribution of wealth, and redress the economic balance among the various communities, was to restructure the ownership of share capital in the corporate sector. Since the incidence of poverty was significantly large among the Bumiputera community (who are largely Muslims) as compared with other ethnic groups, targets were then set so that by the end of 1990 (when the NEP expired), the Bumiputera's corporate ownership would be 30%, the non-Bumiputeras 40%, and foreigners the remaining 30%. This goal was in stark contrast to the breakdown of 2.4%, 34.3% and 63.3% respectively, in 1970. Upon the expiration of the NEP, another long-term policy called the *National Development Policy* or the NDP (1991-2000) was introduced. The latter builds upon the achievements and experiences of the former, offering a broader framework to achieve the country's socio-economic objectives by putting more emphasis on growth and market forces as means of achieving economic equilibrium among the races. Meanwhile, the long term goals of the Government have always been to educate and develop the Bumiputera Muslims into an equally competent ethnic group as the non-Bumiputeras, in technological advancements as well as economic achievements.

Nevertheless, after almost twenty-five years since the implementation of the NEP in 1971, despite a plethora of measures designed to enhance the economic position of the Bumiputera Muslims, many are still perplexed to understand the inability of the community to achieve the NEP's target of acquiring 30% of the total equity in the

corporate sector. As we have indicated at several places in the earlier chapters, the Government has indeed introduced numerous policies and reforms, including the granting of direct assistance, training, education and incentives for the community in order to encourage them to participate actively, both in the stock market as well as in the small and medium-sized business sectors. However, the response has not been encouraging. There is still an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and consequently the problem of the inequitable distribution of share capital ownership among the ethnic communities persists. By the end of 1992, the non-Bumiputeras still maintained their dominance in the corporate sector, owning about 40% of the total corporate equity, as compared to a mere 18% by the Bumiputeras, (with the remaining held by foreigners and other nominee companies).

To compound the problem further, there were also reservations among a section of potential Bumiputera Muslim investors about participating in the stock market, their contention being that such activity was similar to gambling in a casino, and hence is Islamically forbidden. These are but some of the issues that warrant attention and explanation, for if left unchecked would jeopardise the Government's long-term objectives of achieving a balanced socio-economic development in the country, while pursuing the economic equilibrium among the communities.

11.2 Summary of the Study

In essence, the main thrust of the study rests upon the tasks of, firstly, analysing the underlying reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and secondly, exploring the means and possibility of redressing the balance of equity distribution (or share capital

ownership) among the various communities in the Malaysian corporate sector, without necessarily transgressing the Islamic religious limitations.

To accomplish these tasks, we developed a broader frame of objectives (as defined in *Chapter One*) so as to incorporate an all-encompassing analysis generally involved in a descriptive research (*what* is going on), explanatory research (*why* is it going on), and quantitative theory-testing methodology (involving statistical analysis). The study was broadly divided into two parts to distinguish between two different sets of analysis. While the first was based on secondary information obtained from various sources, the second part attempted to draw information and inferences (on the characteristics of the Bumiputera Muslim investors) from a variety of statistical analyses, conducted on a set of primary data gathered through a field survey. What follows is a brief summary of the exercise conducted and findings of the study, in the order in which the chapters have been organised.

11.2.1 Part One

We began by providing an overview of the Malaysian economy, examining its growth and development over the past three and a half decades and compared these with the progress and achievements made by the Bumiputera Muslims. Based on the Government's statistics presented, it was indeed reassuring to note that there had been a significant improvement in the community's economic and financial positions, as compared to situations prior to the implementation of the NEP. The rapid economic development and substantial growth in income had brought about a significant reduction in the incidence of poverty among the Bumiputeras, reducing the rate from 65% in 1970 to 23.8% in 1990, and to an estimate of less than 20% in 1993. The mean monthly household income (in current prices) for the community improved from about RM172 (£43) in 1970 to RM928 (£232) in 1990, and increased further to RM1239 (£310) in

1993. In tandem with the progress made, there was also a considerable improvement in the proportion of Bumiputera's corporate equity ownership, increasing from 2.4% in 1970 to 19.2% in 1990, and finally to an estimated 20.3% at the end of 1994.

However, a more objective analysis would require a cross-sectional comparison with the achievements made by the other ethnic groups. In this regard, it could be easily noticed that the NEP was far from achieving many of its targets, be it in poverty eradication, income distribution, the restructuring of society, or increasing corporate equity participation for the Bumiputeras. Although the Government had contributed in several significant ways to enhance their economic position (particularly in the area of corporate equity ownership), it was apparent that there was a limit to what could be done by the authorities. For instance, on many occasions when the Government's adjustment programmes, policy changes and financial reforms created substantial business opportunities, the Bumiputera Muslims were not able to take advantage of the situation due to their lack of experience, technological knowledge, capital, managerial expertise, and weak business attitudes. Consequently, they continue to trail behind the non-Bumiputeras in private sector business ventures. Nevertheless, in view of the significant improvement made during the twenty-year NEP period, we contend that the potential and prospect for redressing the economic balance among the various ethnic groups, remains considerable.

To complement the evaluation of the Malaysian economy, we next appraised the development of its financial system, examining the process of financial deepening, liberalisation, and reforms that had taken place over many years. A developed and efficiently operating financial system is indispensable for an expanding economy. It serves as the nucleus of the overall economic system by facilitating the transfer of financial resources from the surplus units to the deficit units. The ease of transferability not only ensures liquidity for holders of financial assets, thereby reducing the volume of idle balances in the economy, but also enables the optimum use of savings for long-term

productive activity. It thus helps sustain economic growth and prosperity at a higher level, which eventually contributes to the overall socio-economic development of the country.

The Malaysian financial system is basically made up of three broad categories, namely the banking system, the non-bank financial intermediaries, and the financial markets. Indeed, the banking system had experienced several structural changes, recording a considerable growth in its total assets which rose from RM7.5 billion (£1.9 billion) in 1970 to almost RM442 billion (£110.5 billion) by the end of 1994, an average annual growth of more than 18.5% for twenty-four years.

Meanwhile, in response to the increasing Islamic awareness among the Bumiputera Muslims, the Government introduced an interest-free banking scheme, an Islamic money-market, and several Islamic financial instruments, operating side-by-side with the conventional banking system. Since the alternative system was considered to be more appealing to the large Muslim population in the country, the Government was optimistic that the efforts would not only fulfil the *Shari'ah* obligations (which forbid *interest* in business transactions), but more importantly, would enable the policy-makers to enhance mobilisation of the Bumiputera Muslims' financial resources. This could then be channelled for investment purposes in the capital market which eventually would encourage and increase the community's participation in equity ownership. What was therefore important was to determine the level of encouragement the Bumiputera Muslims had to take advantage of the facilities available to enhance their role in the economic activities of the country.

Based on the financial reports of 1994, we noted that the volume of funds mobilised through the Islamic banking system and the response to the issuance of Islamic financial instruments were relatively insignificant when compared to the established conventional institutions. During the year, although total assets accumulated

by the system rose sharply by 117% from a year earlier to RM5.2 billion (£1.3 billion), the total deposits mobilised and total financing extended by the Islamic banking system amounted to only RM4.7 billion (£1.18 billion) and RM1.7 billion (£0.43 billion), respectively.

Considering a country with a Muslim population of about ten million, constituting about 53% of the population, these figures were very small by any standard. It was more revealing when compared with the total amount of deposits of RM232.1 billion (£58.03 billion) mobilised by the conventional banking system during the same period. In fact, most of the funds had been concentrated within Bank Islam Malaysia rather than the remaining thirty-seven financial institutions which operated the interest-free banking scheme¹. This implied that the volume of new depositors (apart from Bank Islam's captured market), was possibly marginal.

In addition, the breakdown of deposits placed by individuals, the public sector and the corporate sector in the Islamic banking system were 47%, 45% and 8%, respectively. Despite the efforts of the Central Bank and the Government, the issuance of Islamic notes and the RM30 million (£7.5 million) Cagamas *Al-Mudharabah* bonds was still negligible compared to RM8.9 billion (£2.2 billion) of Cagamas conventional bonds outstanding. Although the lukewarm response from the private enterprises (which were predominantly owned by the non-Muslims) was understandable, the frugality of the Bumiputera Muslims participation in the scheme was indeed surprising.

Several reasons however, could be offered for the unenthusiastic response. Firstly, it could be possible that a large percentage of the Muslims in the country were reluctant to adopt the *Shari'ah* means of financing because they found them to be

¹The *Islamic banking system* in Malaysia refers to an environment that comprises (at the end of 1994) Bank Islam Malaysia and a group of 21 conventional commercial banks, 13 finance companies and 3 merchant banks that offer the Islamic-window services through the interest-free banking schemes (IFB-schemes).

materially less advantageous compared with the established conventional financial practices. This is more so in the private sector, where the business community would not shun their existing banking practices by virtue of them being more compatible with their profit-oriented and acquisitive attitudes. Secondly, the Muslims may have felt indifferent about the scheme because they were not readily convinced of the significant differences between the latter and the existing interest-based services (apart from its Islamic label). Thirdly, there might not have been enough publicity and promotional exercises from the financial institutions themselves. Finally, apart from the material returns, it could also be possible that the range of products and services rendered by the scheme were not appealing enough for them to make the change.

The key point to appreciate here is that although *Islam* (or religion) could prove to be a driving force to spur the Bumiputera Muslims to get more involved in economic activities, the exercise of motivating them and the process of developing an alternative Islamic financial system does not end with the issuance of Islamic instruments or the establishment of Islamic financial institutions alone. In fact, institutional development and regulatory reforms only facilitate the process of establishing it. While many contend that the system and its instruments are indeed economically viable, much of its long-term success depends on its ability to offer competitive returns, attractive investment incentives, appealing and innovative products and services, and most importantly, the ability to draw meaningful responses from both the public and the corporate sector alike. The task is made more delicate in a multi-religious and multi-ethnic environment. Indeed, it requires more than the simple political will of the Government and is much more challenging than some of the theories propounded in Islamic economic literature. The process also requires elucidating and educating the public, in particular the Muslim community (rather than compelling them), toward the distinct features of the system and what it has to offer.

Thus, in exploring the alternatives of developing some new Islamic investment instruments which could mobilise a more significant volume of the Bumiputera Muslims' financial resources, it is equally important to understand the perceptions and attitudes of the potential customers, to appreciate their different shades of needs, the importance they place on risk and returns to investment, their expectations of the quality of services, and many others. These factors were found to be more revealing when we analysed the statistical results from the field survey. Nevertheless, the scope for harnessing funds from the community and channelling towards more productive investment in the capital market (as a means of redressing the economic balance), remains wide.

Next we examined the development of the Malaysian capital market which is basically made up of the Government securities market, the corporate bond market, and the equity market (that is, the Kuala Lumpur stock market). The aim was to gauge the role of these markets in facilitating the achievement of the NEP's target of acquiring 30% equity ownership for the Bumiputera community. We noticed that in consonant with the strong economic fundamentals of recent years, the equity market had undergone profound development in many areas, including its size, market capitalisation, market depth, breadth and resilience.

The shift in the Government's policy towards promoting a private sector led growth, and the presence of a wide range of financial instruments had contributed significantly in enhancing the process of financial intermediation in the capital market. Consequently, the size of funds mobilised grew, increasing the depth and breadth of the market further. For instance, in the early 1970s, when the NEP was introduced, there were only about 150 Malaysian-incorporated companies listed on the KLSE, mobilising a mere RM76 million (£19 million) of funds. By the end of 1994, the size had increased to 478 companies mobilising RM17 billion (£4.25 billion). The market capitalisation of the stock market rose to RM509 billion (£127.3 billion), almost three times the size of

the country's GNP. Based on the funds mobilised through the financial system relative to the needs of the private sector for investment purposes (about RM75 billion or £18.8 billion during the 1991-1995 period), there was considerable scope for the community to enhance their financial position and equity ownership of companies in the private sector.

Meanwhile, we noted that the unit trust industry had also expanded rapidly in tandem with the strong performance in the KLSE during the last few years. Several *Islamic unit-trust funds* had also been introduced to provide additional avenues for the Bumiputera Muslim investors to participate in the capital market. At the moment there are at least three Islamic-based trust funds in the market. At the end of 1994, there was a total of 51 unit trust funds managed by 19 companies with a total volume of 25.1 billion units in circulation held by 6.2 million investors. The aggregate market value of these funds was RM35.9 billion (£9 billion) which made up only about 7% of the total market capitalisation of equities.

Indeed there is an immense potential to develop the unit trust industry further, especially in mobilising funds from small Bumiputera Muslim investors and savers. With the development of the Islamic banking system, the expectation is to see the financial institutions which offered the interest-free banking scheme to be offering to manage Islamic unit-trust funds. The latter is basically a form of equity financing which is by nature participatory and can therefore accord well with the Islamic financing principles of *Al-Mudharabah* (profit and loss sharing) and *Al-Musharakah* (equity partnership). These are but some of the instruments that need to be promoted since they have been shown to be very successful and appealing to a large section of small investors in many developed markets.

This led us to analyse the response and effectiveness of the Government sponsored unit trust schemes, the *Amanah Saham Nasional* (National Unit Trust or

ASN) and the *Amanah Saham Bumiputera* (Bumiputera Unit Trust or ASB), which were specifically designed to mobilise the Bumiputera funds for capital market investment and the acquisition of share capital ownership of public companies (both listed and unlisted).

Since their implementation, the response from the Bumiputeras toward the two unit trust schemes has been very encouraging. At the end of 1994, of the total unit trust funds managed in the country, the ASN and ASB schemes collectively accounted for 71.3% of the total units in circulation, 84.8% of unitholders and 81.3% of the total market value of the funds. The two schemes involvement in the capital market had in fact, contributed between 15-20% of the Bumiputera share's of corporate equity ownership.

During the same period, there were 3.94 million and 1.31 million investors participating in the ASB and ASN schemes, respectively. This represented about 50% of the eligible Bumiputera investors for the ASB and 19.7% for the ASN schemes. Had the proportion of participants been higher, the achievement of equity acquisition for the Bumiputera's corporate ownership could have been greater than the existing 20.3%. Some observers believed that the main reason for failing to capture the remaining 50% of eligible investors was because of the schemes involvement in investing in *interest-based* financial institutions (which deterred the religiously conscious Bumiputera Muslim investors). Whether *Islamicising* the two schemes would bring about significant changes in the funds mobilised remains debatable.

While the response to the two unit trust schemes was promising, the same was not the case with the stock market investment. There were many problems associated with the latter, but the main issue was the *short-termism attitude* of the Bumiputera Muslim investors. There was a strong desire for short term capital gains, but preferably without risk taking. For instance, during the mid-term review of the Sixth Malaysia Plan

(1990-95) we found that, while the total equity in the corporate sector increased by about 10% per annum between 1990 and 1992, the Bumiputera ownership of share capital in fact declined by one per cent to about 18.2% at the end of 1992. Bumiputera ownership of privatised entities had also dropped considerably. There were large divestments of Bumiputera holdings in assets and shares, estimated at more than RM860 million (£215 million) during the period. The dilution was even more substantial in public listed companies, with total divestments amounting to RM1.8 billion (£0.45 billion) at par value or RM18.5 billion (£4.6 billion) at 1992's market price. It was not surprising that at the end of 1994, the estimated Bumiputera corporate equity holdings had only increased marginally to about 20.3%, far short of the targeted level of 30%.

In reviewing Bumiputera participation in the economy, the Government had at one time indicated that, *"unless and until Bumiputeras cultivate the habit of retaining their wealth or reinvesting their earnings from the ownership of their wealth, the objective of at least 30% stake in the corporate sector will never be achieved"*. Indeed the growing availability of resources transferred to the group presented an excellent opportunity for them to plough back into productive and constructive activities. In fact, if all the Bumiputera equity at the time of privatisation was taken into account, Bumiputera ownership of privatised entities (excluding Government holdings) today would amount to at least 69% of total equity. However, at the end of 1994, Bumiputera investors (including the trust agencies) formed only 17.3% of the total shareholders on the Kuala Lumpur Stock Exchange, holding 31.8% of the total equity or paid-up capital of all listed companies.

Recognising the problems of the Bumiputera Muslim investment attitudes, the Government then adopted a new strategy in which specific numerical targets for the redistribution of equities among ethnic groups (such as in the NEP) were no longer defined. Instead, the new National Development Policy (NDP) aimed at improving the

capacity of the Bumiputeras to generate income and create wealth as well as to provide the appropriate skills for them to effectively retain and manage their wealth.

The NDP thus gave more emphasis to human resource development programmes for the Bumiputeras, especially in education, training and the inculcation of more business oriented values. These were regarded as fundamental requirements for achieving the growth and distribution of wealth. Until such time as a sufficient pool of more viable enterprises, and competitive and resilient Bumiputera entrepreneurs has been created, the Government efforts in providing direct assistance, credit facilities, and special privileges for the Bumiputeras are expected to continue. In essence, though specific targets and timeframes were abandoned in the NDP, the underlying objective of acquiring a sizeable ownership of corporate share capital for the Bumiputeras survived.

The remaining issue faced by the Government was to justify to the Muslim community the necessity of the stock market in a modern economy, as well as the legitimacy of stock market investment from the *Shari'ah* perspective. This is in the light of an increasing trend of Islamic awareness among the new affluent and educated Bumiputera Muslims who have shown interest in observing the Islamic investment principles. Indeed there was a growing concern in the Government that the community might even opt out of the economic activity, especially in the capital market, on religious grounds. This would certainly jeopardise its long term goals of developing the Bumiputeras into an equally competent ethnic group as the non-Bumiputeras, in technological advancements as well as economic achievements.

We explored many competing views of Muslim jurists and scholars and contend that, apart from a few forbidden transactions, the *Shari'ah* has not prohibited the Muslims from engaging in stock market investment. In fact, equity financing is by nature participatory and accords well with the principles of *Al-Mudharabah* and *Al-Musharakah*. The Muslims cannot afford to ignore the potential of the capital market in

raising their economic and financial positions. To disregard the stock market is also to neglect the economic power of the private sector and its attendant power of wealth creation and prosperity, employment and training opportunities, economic knowledge and technology, and global economic relations. It is thus imperative for the Muslims in general and the Bumiputera Muslims in particular, to appreciate the objectives (*maqasid*) and underlying concepts of the *Shari'ah* when faced with today's economic challenges. In certain instances however, Muslim economists need to employ independent reasoning (*ijtihad*) in light of the basic guidelines of the *Quran* and the *Sunnah* to resolve issues.

A stock market, as part of the capital markets, performs a number of important economic and financial functions. Collectively, they are mechanisms which facilitate the transfer of investible funds from economic agents in financial surplus to those in financial deficits. The stock exchange provides a forum for buyers and sellers to conduct business transactions in different types of companies' securities. The activities of buying and selling these securities are extremely important for the efficient allocation of capital within economies. It has been generally recognised that the development of capital markets is fundamental in promoting economic growth. Although developing a capital market is not without cost, however in sum, the benefits of the market outweigh their costs; and the inherent problems associated with the stock market could be overcome with an adequate regulatory framework.

It was generally agreed that Islam allows both equity and debt financing. While the former is effected through *profit sharing contracts*, the latter must be effected through *deferred contracts of exchange*. There being no major differences between equity financing and the concept of *Al-Musharakah*, project financing through equity participation, listing on the stock exchange, unit trust schemes, and venture capital are generally acceptable in Islam.

Based on the preceding arguments, we conclude that, provided there exist no elements of *riba* (interest), *maysir* (gambling), and *gharar* (uncertainty leading to exploitation, fraud and injustice) in the contract between the consenting parties of the buyers and the sellers, there are no reasons to believe that investing in the stock market (of companies whose nature of business are not prohibited in Islam), should be regarded as unlawful from the *Shari'ah* perspective.

11.2.2 Part Two

Our final task was to examine and analyse the characteristics of the Bumiputera Muslim investors from a series of statistical test results from a final set of 575 respondents who responded to a closed-ended questionnaire (consisting of 71 questions) during a field survey, conducted between June and August 1993. It was hoped that this would shed further light on the probable causes of having low numbers of Bumiputera Muslims participating in the stock market. One of the main aims of many quantitative research in the social sciences is to explain *why things are the way they are*, that is, to demonstrate causality that one variable has an impact upon another.

Thus, it was necessary for us to investigate and understand several issues relating to the community in order to arrive at some conclusions to the problem. These include the need to examine the determinants of savings and investment among the Bumiputera Muslims; their patterns of savings and consumption; educational background and income distribution; attitude towards risk and returns in investment; preference between short-term capital gains and long-term growth and dividend yields; religious commitments in business transactions or investment; and finally, their willingness to sacrifice the benefits of experiencing (presumably) higher returns from investment in a "non-Islamic portfolio", relative to the lower returns from a "constrained investment portfolio" that observed the *Shari'ah* rulings.

The research undertaken employed both the processes of *induction* and *deduction* at different stages of the study. It was difficult to describe or identify whether we were *theory testing* or *theory constructing* because the logic of the research process involved the shuttling, back and forth between theory and observations. Thus, rather than moving through a fixed set of steps, we moved through them in a fashion that continuously reinforced our previous findings until reaching the optimal limit of the statistical analysis.

The method used in data collection was the *survey research design*, employing the *self-administered close-ended questionnaire* as the research instrument. We also used the combination of the *stratified random technique* and the *multi-stage (area) cluster sampling* in determining our sampling frame.

Prior to constructing a testable hypothesis, we developed an abstract hypothetical theory based on all the relevant secondary information associated with the issue. We theorised that, among the plausible reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market include issues such as their (i) lack of investible financial resources, (ii) preference for investing in houses, land and less-risky investments, (iii) risk-averse attitude, (iv) lack of appreciation and knowledge of the stock market, and (v) the impression that investing in stocks was equivalent to gambling and hence, not permissible in Islam.

Based on the above, we developed the following testable model :

$$Y_i \equiv \text{fn} (\alpha + \sum \beta_n X_n + e), \text{ where } i = 1 \text{ to } 2; n = 1 \text{ to } 6; \text{ and}$$

Y_i = respondent's level of investment/involvement in the stock market,
represented by

Y_1 = respondent's percentage of total investment in stocks and shares, and

Y_2 = respondent's average market value of all their shares.

The independent variables X_1 to X_6 refer to the followings :

X_1 = gross household income;

X_2 = consumption and savings attitude;

X_3 = investment's attitude;

X_4 = educational background/knowledge of the stock market;

X_5 = level of risk preference/averse (that is, risk attitude);

X_6 = level of religious convictions/conscience; and

α = some constant value;

β_n = the respective coefficient of the independent variables X_1 to X_6 ;

e = some unexplained phenomena that have direct influence on the investors interest in risky assets.

Although the best approach to analyse the model would have been to employ the regression technique, the nature of the variables involved (nominal and ordinal) did not permit us to do so. Parametric regression analysis would require the variables to be at the interval level of measurement and thus it would be meaningless to construct a regression model if the variables involved were nominal and ordinal. Hence, in addition to the univariate and bivariate analyses, we used factor analysis and the hierarchical loglinear analysis in examining multiple variables.

The Results :

11.2.2.1. Univariate/Descriptive Analysis

The nature and characteristics of the sample set was as follows : a large percentage of the Bumiputera Muslim respondents were of the younger age group (between 30-40 years old), well educated and trained, falling within the middle-income band, spread between the private and public sectors, married and settled with a small family, and (based on their age groupings) were presumably on the verge of establishing themselves further in their career path. They fell between the category of junior managers and senior executives or administrators in their respective sectors. This

probably presents an ideal group to be included because they could be considered as the current "second-liners" that would take over the future top-level executives.

Note that of the 575 respondents, 192 (33%) of them were drawn from the smaller towns and cities of West Malaysia, while the remaining 383 (67%) came from the capital city Kuala Lumpur. The followings are some of the common perceptions and behaviours found in the sample :

(i) More than 60% of them (supposedly from the professional and business group), seemed to have only a general understanding of some of the major Government's policies that were formulated specifically to enhance their economic well-being. While their understanding and appreciation of these matters was suspect, almost half of them were not content with the community's economic achievements and about 80% of them strongly believed that there was a need for more Bumiputera Muslims to be involved in the business world.

(ii) Although more than 70% were satisfied with the Government's unit trust schemes (the ASN/ASB), almost 64% who responded believed the schemes have mostly benefited the "already rich people" rather than achieving its prime objective of distributing wealth and share capital ownership equitably, among the many poor Bumiputera Muslims. This was strongly confirmed by the responses to the questions that followed. About 63% felt the Bumiputera Muslim's intra-community economic-gap had widened further while more than 87% responded that the situation warrants attention of the policy-makers (to review it's policies of wealth-distribution and equity ownership). It was interesting to see that a large majority of them (63%) seemed to support the idea of the Government introducing a *forced-investment policy* among the Bumiputera Muslims, in order to increase their investment participation (rather like the national insurance contributions in countries such as the United Kingdom).

(iii) Although 60% agreed that the stock market was one of the most important means of mobilising the Bumiputera Muslims' financial resources, more than 90% believed that the majority of the community did not really understand or appreciate the functions and working mechanisms of the institution.

(iv) On the question of whether religion had been the main factor in preventing a large number of Bumiputera Muslims from participating in the stock market, almost 60% of the respondents agreed while another 17% were undecided. We then sought opinions on a hypothetical situation, inquiring whether they felt a large number of Bumiputera Muslims would participate in the trading and holding of shares, should there exist an Islamic-based stock exchange. The response was indeed significant as almost 70% agreed. However, despite this fact only 10% felt the existing stock exchange was unacceptable, and another 24% claimed the current environment and economic situations compelled them to accommodate and condone trading on it. Nevertheless, almost 60% would only accept those counters which were considered Islamically legitimate.

Most of the responses related to Islamic religious convictions showed mixed feelings within each respondent, that is, while the sentiments toward Islamic-based institutions (such as the Bank Islam Malaysia) were encouraging, many were reluctant to move their accounts over to the bank. In short, apart from their preference for an Islamic financial institution, the general yardstick to determine their support or participation in it was still professionalism and material rewards. These include factors such as the quality of services, convenience in getting those services, competitive products, innovation in product design, and competitive costs and returns from both the products and services.

(v) With regard to savings, we noticed that more than 95% of the respondents kept savings and about 71% of these were saving regularly, though not necessarily on a monthly basis. Almost 70% of them were saving less than 10% of their monthly

earning. Thus, in terms of the volume of savings they held, the amount was not significant. For instance, of all the savers, about 53% had a total savings of less than RM10,000 (£2,500), 17% of the others had savings of between RM10,000 (£2,500) and RM20,000 (£5,000), and the remaining 30% had more than RM20,000 (£5,000).

As to the reasons for savings, it was interesting to find that, an almost equal percentage of about 40% responded to keep savings for "mishaps", "children's education", "future use", and "all the above". Only a small percentage (22%) indicated that they did so for future investment purposes. This probably explained their choice of savings institutions, where the Islamicity of these institutions did not matter much. Besides, the returns from the savings account were also considered insignificant.

Meanwhile, we noted that more than 87% chose either the conventional commercial banks, or maintained these accounts together with some other Islamic institutions such as the Bank Islam Malaysia, Islamic co-operative society and the Hajj Pilgrimage Funds (or Tabung Haji). In general, it was typical of the Bumiputera Muslim community to maintain current-accounts with the conventional banks and savings-accounts with the Bank Islam Malaysia. At the same time, it was also important to note that barely 13% of the respondents saved solely in the Islamic bank or Islamic organisations. The insurance institutions also reflected the same situation where only 6% had chosen to hold the Islamic insurance policies.

(vi) Finally, most respondents indicated their risk-averse attitude in relation to capital market investments. The responses showed the respondents high preference to invest in safer or less risky investments such as houses and land. Their investments in the stock market were generally for speculative short term capital-gains rather than for long-term growth and dividend yields. As expected 79% of the sample respondents had investments in houses, 35% had land, while 75% of them had stakes in the Government-

supported ASN/ASB unit-trust schemes. Meanwhile, only 42% had direct investment on the Kuala Lumpur Stock Exchange (KLSE).

The important point to note was the fact that, despite the relatively high figures recorded in unit trust investments and the KLSE taken together, more than half of them (53%) still regarded investments in houses as their most important assets relative to 26% in the unit trust schemes, and about 6% in the KLSE. These facts clearly reflected the dominant cultural attitude of the Bumiputera Muslims in Malaysia, who would rather have their life-long savings or investment in houses than in the speculative risky investment of the equity markets. The irony of the fact was that, despite this emphasis, only 11% claimed to have a professional knowledge of their investment choice.

11.2.2.2. Bivariate Analysis

There were basically two main parts to the analysis. The first was to test the independence of responses to the questionnaire from two unrelated groups of respondents (based on their domicile-status) within the sample; and the second part measured the association as well as explored the presence of any significant relationships between several pairs of variables within the hypothetical model described earlier.

For the first part of the analyses, we defined our null-hypothesis H_0 as follows : "that the Kuala Lumpur and non-Kuala Lumpur respondents did not differ in their responses to each of the questions posed, that is, *the responses were independent of the respondents' domicile*". The *level of significance* used as the basis for rejecting the null-hypothesis was at the 1% level or 0.01. Rejecting the null-hypothesis, H_0 , would imply that "it appeared unlikely that the Kuala Lumpur and non-Kuala Lumpur respondents had responded in the same way", that is, *it did appear that the responses given were dependent on where they lived*.

After conducting a series of tests we came to the conclusion that, *in general, there was no reason to believe that the pattern of response from the subjects under study differed significantly between those from Kuala Lumpur and the other smaller towns and cities.* In other words, the responses given were independent of where the respondents came from, implying that most of the observations seen earlier were indeed commonly shared values among the Bumiputera Muslim community.

For the second part of the bivariate analyses, we defined our null-hypothesis H_0 as follows : "that the level of Bumiputera Muslim involvement and participation in the stock market of Malaysia *was independent* of their household income, savings and investment attitudes, educational background, knowledge or appreciation of the stock market, attitude towards risk, and Islamic conscience and conviction". The *level of significance* used as the basis for rejecting the null-hypothesis was maintained at the 1% level or 0.01. Rejecting the null-hypothesis, H_0 , would imply that "it appeared unlikely that the Bumiputera Muslim involvement in the stock market of Malaysia (as represented by their percentage of investment in shares and/or their total market value) was independent of the six factors indicated above". In short, *they were related.*

In summary, our test results produced some pertinent information that could be used to infer upon the nature and general characteristics of the Bumiputera Muslim investors in Malaysia.

(i) Firstly, we found that there existed a significant relationship between the respondents' level of investment in shares and their total household income.

(ii) Secondly, there was a positive and significant relationships between the respondents' savings behaviour and their investment attitudes. At the same time, it was also apparent that the respondents' ability or willingness to invest in the stock market was dependent upon their disposable income and personal financial obligations.

(iii) Thirdly, the test results indicated the risk averse attitude of the respondents, who preferred to invest in less risky investment ventures such as the Government-supported unit trusts schemes, housing, or land, relative to the more risky investments of stocks and shares in the capital market.

(iv) Fourthly, the variables "appreciation of the stock market" and "education level" showed positive correlations with the level of the respondents' investment participation.

(v) Finally, there were also some inconsistencies in the test results that measured the relationships between the respondent's investment participation and their religious opinion of the stock market. For example, while many felt uncertain on the Islamic *Shari'ah* rulings of investing in the stock market, at the same time their opinions had not deterred them from participating in it. In other instances, although they (indirectly) indicated their preference for an Islamic-based stock market (or financial system), there was insufficient evidence to suggest that the institution would receive meaningful support or response from the Bumiputera Muslim community.

11.2.2.3 Hierarchical Loglinear Analysis

The objective of employing the HILOGLINEAR procedure was to enable us to explore and uncover the potentially complex relationships among variables in multidimensional crosstabulation tables. In situations involving two or three variables, the analysis of their crosstabulations could still be carried out either by the simple associations or elaboration techniques. However, when the analysis involves more than three dimensional tables, the number of possible relationships increases alarmingly, so much so that it would be almost impossible to unravel their significant interactions.

In conducting the HILOGLINEAR procedure, the initial expectation was that the models designed would generate some conclusive evidence on the abstract hypothetical theory suggested earlier. We also attempted to examine the relevance of the variables being used to test the hypothetical relationships between the respondents' level of stock market investment and the various independent factors, collectively. However in all the designs, the final models generated only the first and second-order effects, that is the effects that involved a maximum of only two variables. Since the observed significance levels were large for all the three-way effects, this confirmed that the first and second-order interactions were sufficient enough to represent or explain the relationships of the variables involved. As such, a simple conclusion could not be drawn without considering all other findings. *Nevertheless, most of the results obtained seemed to reaffirm our previous bivariate analyses.*

11.2.2.4 Factor Analysis

On the other hand, the basic aim of factor analysis was to examine whether on the basis of the respondents' answers to a large number of questions, a smaller set of some common factors underlying these questions could be identified. Through the process of careful selection, removals, and several computer trial-runs, we managed to identify twenty-two relevant variables from an original set of seventy-two. These twenty-two variables explained 61% of the total variance of 22 in the varimax rotated factor matrix. The procedure also identified eight common underlying factors represented by the twenty-two variables and these have been described as : (i) household income; (ii) savings and investment patterns; (iii) consumption pattern; (iv) education level; (v) knowledge and appreciation of the stock market; (vi) risk attitude; (vii) opinion of religious influence and (viii) religious consciousness. *These factors seemed to correlate very closely with our hypothetical proposition put forth in the model equation above, implying some truth in our suggestion.*

However, the factor analysis conducted was of the exploratory kind, in which the relationships between variables were examined without determining the extent to which the results were able to fit a particular model. It would require a confirmatory factor analysis to confirm our results against the model. This was not carried out because it would tend to stretch the assumptions on the nature of variables involved to their limit.

As indicated earlier, factor analysis is generally appropriate for scale development when you have a set of interval-level, non-dichotomous variables. In this study, we have treated the nominal and ordinal variables (of multiple-item measures) as possessing interval variable characteristics because these measures permit a large number of categories to be stipulated. Thus the inferences drawn need to consider these assumptions. In the final analysis, the validity of the results obtained through the FACTOR procedure rested upon the extent to which these assumptions could hold.

11.3 Conclusions

We began our study by identifying two main tasks that we wanted to perform. Firstly was to analyse the underlying reasons for having an insignificant number of Bumiputera Muslims investing and participating in the Malaysian capital market, and secondly, to explore the means and possibility of redressing the balance of equity distribution (or share capital ownership) among the various communities in the Malaysian corporate sector, without necessarily transgressing the Islamic religious limitations.

The discussion in the preceding section had identified most of the probable causes to the problems. In conclusion, the followings underlie the principal reasons :

1. A lack of investible financial resources to make a worthwhile investment in the capital market. This was presumably due to their low household income which in turn was associated with their nature of employment and level of education. Besides, it was also common to find Bumiputera Muslim families with relatively large number of dependants, many personal financial obligations (due to consumption patterns, preferences, and priorities), which eventually resulted in a smaller disposable household income.

2. Short-termism characteristic in stock market investment, often having a strong desire for short-term capital gains rather than sustaining those shares as capital ownership for long term dividend yields and investment appreciation. Their lifestyles have also influenced the preference for current consumption, and hence capital gains.

3. A risk averse attitude in business and investment activities, preferring to invest in less-risky investment alternatives such as houses, land, ASB unit trust scheme, and others.

4. A lack of appreciation and knowledge of the working mechanism of the stock market which eventually resulted in their failure to tap the potential and take advantage of the economic opportunities generated by the market process of financial intermediation.

5. The influence of religious conscience and convictions leading to the belief that investing in the stock market as similar to gambling in the casino, and hence not permissible in Islam.

On the other hand, in exploring the possibilities of enhancing the level of Bumiputera Muslims share of capital ownership (and hence reducing the inequitable

distribution among the various communities) in the Malaysian capital market, we suggested the followings as some of the probable solutions :

1. To educate the Bumiputera Muslim community on the merits of stock market investment and the needs to appreciate and manage the risks involved;
2. To employ tax incentives policy so as to encourage greater savings and promote long-term investment strategy among the community;
3. To offer and promote Islamic investment instruments (such as the Islamic unit and investment trusts) which may offer competitive returns and bring about a positive and meaningful response from a large section of the Muslim community;
4. To elucidate the Muslim community on the permissibility of stock market investment from the *Shari'ah* perspective.

11.4 Further Research

Apart from the analyses on the secondary information, the above conclusions are made on the basis of inferences drawn from the statistical tests that indicated some structural correspondence between the dependent and independent variables in the model constructed. However, it is necessary to be rather cautious about jumping to the conclusion that the model was indeed a correct representation of the "real world" from the discovery of the structural correspondence alone. Such correspondence only provides evidence in support of the model, but not definite confirmation of its validity.

As discussed earlier, this is because the chain of argument leading to a demonstration of correspondence is a long and fairly complicated one, involving the

choice of indicators and tools appropriate for testing the model, the collection of data using those indicators, and a decision on whether correspondence had actually been found. There was room for error in each of these steps. For instance, there have been occasions where we had treated the nominal and ordinal variables (of multiple-item measures) as possessing interval variable characteristics which might have affected or influenced the actual relationships among the variables. Thus it becomes necessary for future researchers to improve the situation (especially on the level of measurements) in the course of re-evaluating or disproving the above theory and suggestions made.

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APPENDIX A

POPULATION MAP of MALAYSIA

Source: Survey Research Malaysia

POPULATION OF MALAYSIA

	BUMIPUTRA	CHINESE	INDIANS & OTHERS	TOTAL
PENINSULAR MALAYSIA (%)	8848.3 (59)	4691.7 (31)	1568.9 (10)	15108.9 (100)
EAST MALAYSIA (%)	2557.3 (78)	678.3 (21)	32.5 (1)	3268.1 (100)
TOTAL MALAYSIA	11405.6 (62)	5370.0 (29)	1601.4 (9)	18377.0 (100)



PERLIS

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	8.1	6.8	1.6	16.5
RURAL	136.9	20.2	10.3	167.4
KANGAR	8.1	6.8	1.6	16.5
TOTAL	145.0	27.0	11.9	183.9

PENANG

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	117.7	419.8	87.3	624.8
RURAL	311.6	175.6	58.1	545.3
PENANG/ B'WORTH/B.M.	117.7	419.8	87.3	624.8
TOTAL	429.3	595.4	145.4	1170.1

SELANGOR

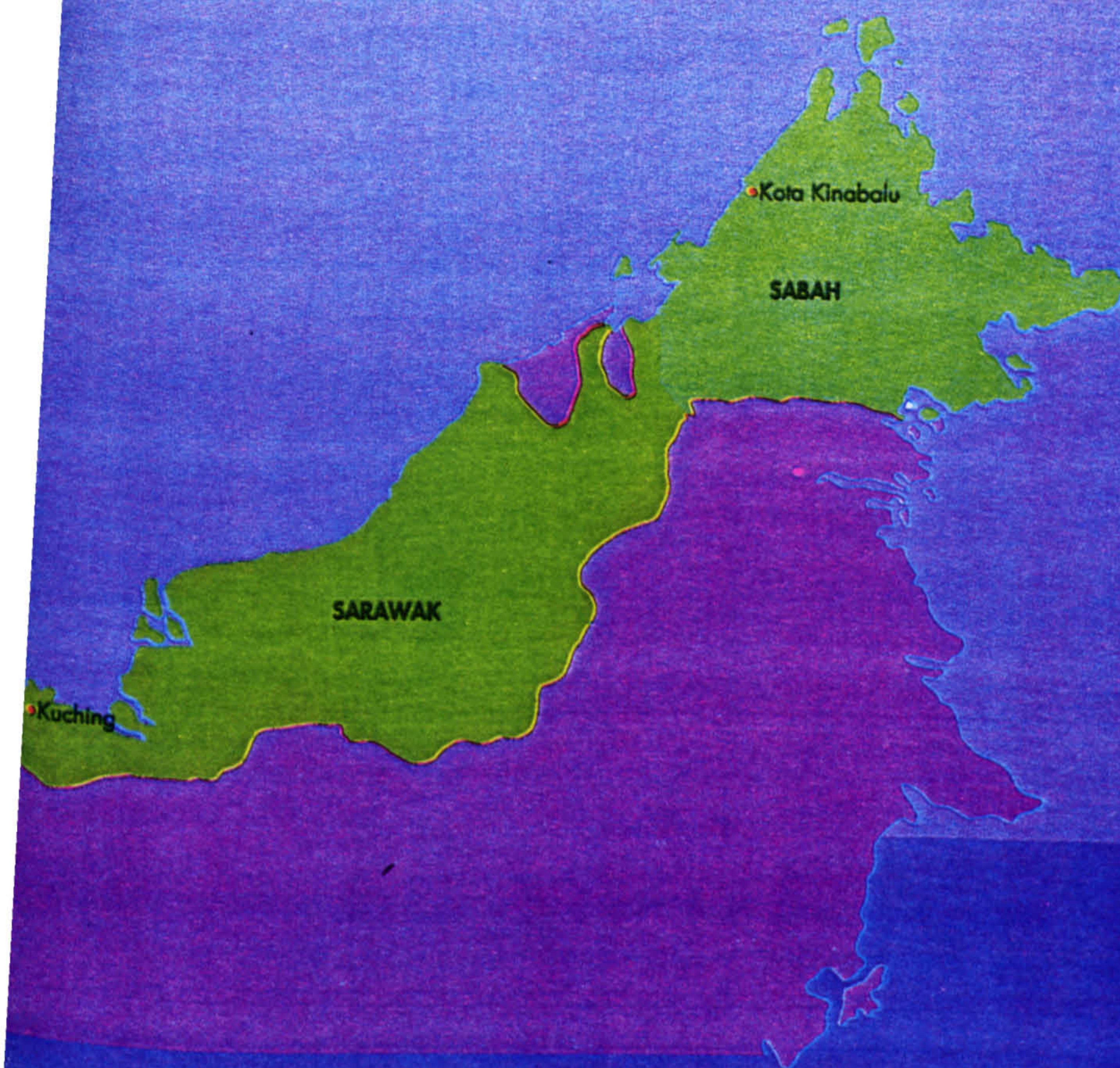
	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	961.9	1235.9	351.6	2549.4
RURAL	772.9	231.9	229.2	1234.0
KL /PJ	779.3	1039.5	271.5	2090.3
TOTAL	1734.8	1467.8	580.8	3783.4

PERAK

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	217.8	484.8	117.6	820.2
RURAL	780.1	320.7	182.6	1283.4
IPOH	79.2	271.8	56.3	406.3
TOTAL	997.9	805.5	300.2	2103.6

N. SEMBILAN

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	88.3	117.3	39.8	245.4
RURAL	244.5	112.5	84.2	441.2
SEREMBAN	58.9	87.9	30.0	176.8
TOTAL	332.8	229.8	124.0	686.6



PAHANG

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	167.4	125.9	19.8	313.1
RURAL	668.1	140.3	62.2	870.6
KUANTAN	129.0	63.4	10.9	203.3
TOTAL	835.5	266.2	82.0	1183.7

JOHOR

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	361.7	402.0	44.8	808.5
RURAL	879.7	378.9	93.8	1352.4
JOHOR BARU	211.1	129.6	22.0	362.7
TOTAL	1241.4	780.9	138.6	2160.9

SABAH (INC. LABUAN)

	BUMI-PUTERA	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	219.4	134.6	5.0	359.0
RURAL	1121.0	60.0	5.5	1186.5
KOTA K'BALU	78.7	69.0	1.9	149.6
TOTAL	1340.4	194.6	10.5	1545.5

SARAWAK

	BUMI-PUTERA	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	161.0	261.2	6.8	429.0
RURAL	1065.9	222.5	15.2	1293.6
KUCHING	85.5	128.1	4.3	217.9
TOTAL	1216.9	483.7	22.0	1722.6

MALACCA

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	31.5	87.8	10.0	129.3
RURAL	269.4	107.0	36.1	412.5
MALACCA	31.5	87.8	10.0	129.3
TOTAL	300.9	194.8	46.1	541.8

TRENGGANU

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	308.8	23.9	3.0	335.7
RURAL	406.5	9.1	2.5	418.1
KUALA TRENGGANU	254.6	15.8	2.1	272.5
TOTAL	715.3	33.0	5.5	753.8

KEDAH

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	87.2	83.0	22.9	193.1
RURAL	896.0	149.3	92.5	1137.8
OR STAR	38.0	38.3	6.3	82.6
TOTAL	983.2	232.3	115.4	1330.9

KELANTAN

	MALAYS	CHINESE	INDIANS & OTHERS	TOTAL
URBAN	289.0	35.4	5.8	330.2
RURAL	843.2	23.6	13.2	880.0
KOTA BARU	233.2	28.8	4.7	266.7
TOTAL	1132.2	59.0	19.0	1210.2

APPENDIX B

Table B1
Estimated Income Distribution of Malaysian between 1983 and 1992

Year	1983	1987	1992
	%	%	%
Up to RM500	45	40	26
RM501 - RM750	16	17	17
RM751 - RM1,000	14	14	15
RM1,001 - RM1,500	11	13	14
RM1,501 - RM2,000	6	7	8
Above RM2000	7	8	13
Not Disclosed	2	2	7
Total % (approx.) :	100	100	100
Estimated Working Population (in '000)	7,721	8,562	9,703

Source : Survey Research Malaysia (June 1993).

Table B2
Estimated Income Distribution of Malaysian's Urban Adults
between 1983 and 1992

Year	1983	1987	1992
	%	%	%
Up to RM500	24	18	10
RM501 - RM750	17	15	13
RM751 - RM1,000	17	17	15
RM1,001 - RM1,500	17	19	18
RM1,501 - RM2,000	10	12	11
Above RM2000	13	16	21
Not Disclosed	2	3	12
Total % :	100	100	100
Estimated Urban Adults (in '000)	3,320	3,682	4,269

Source : Survey Research Malaysia (June 1993).

Table B3
Estimated Income Distribution of Malaysian's Rural Adults
between 1983 and 1992

Year	1983	1987	1992
	%	%	%
Up to RM500	60	56	37
RM501 - RM750	15	18	19
RM751 - RM1,000	11	12	15
RM1,001 - RM1,500	7	8	12
RM1,501 - RM2,000	3	3	6
Above RM2000	2	2	7
Not Disclosed	2	1	4
Total % :	100	100	100
Estimated Rural Adults (in '000)	4,401	4,880	5,434

Source : Survey Research Malaysia (June 1993).

Table B4
Estimated Household Income Among
Bumiputera Malays and Non-Bumiputera Chinese
between 1983 and 1992

Year	Bumiputera Malays			Non-Bumiputera Chinese		
	1983 %	1987 %	1992 %	1983 %	1987 %	1992 %
Up to RM500	63	57	39	15	13	6
RM501 - RM750	14	15	20	18	17	10
RM751 - RM1,000	10	10	14	18	18	15
RM1,001 - RM1,500	7	8	11	19	20	19
RM1,501 - RM2,000	3	3	5	11	12	13
Above RM2000	3	4	7	13	15	23
Not Disclosed	-	3	4	6	5	14
Total % :	100	100	100	100	100	100
Estimated Working Adult Population (in '000)	4,238	4,699	5,386	2,636	2,928	3,280

Source : Survey Research Malaysia (June 1993).

APPENDIX C



الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يُونُفِرُ سِيَّتِي إِسْلَامُ أَنْتَارَا بَعْثًا مِلِّيَّيَا

SURVEY ON
MUSLIMS' SAVINGS AND INVESTMENTS

in the

FINANCIAL MARKET OF MALAYSIA
1993

KAJISELIDIK ATAS
SIMPANAN DAN PELABURAN UMAT ISLAM

dalam

PASARAN KEWANGAN DI MALAYSIA
1993

KULLIYAH OF ECONOMICS

P.O. Box 70, Jalan Sultan, 46700 Petaling Jaya, Selangor Darul Ehsan, Malaysia.
Tel:03-7555322, 7553122 Fax:03-7574407. Telex MA 37161.

**YOU MAY CHOOSE TO ANSWER
EITHER IN
ENGLISH OR BAHASA MALAYSIA**

PART I : ENGLISH

.....

**ANDA BOLEH PILIH UNTUK MENJAWAB
SAMADA DI DALAM
BAHASA MALAYSIA ATAU INGGERIS**

BAHAGIAN II : BAHASA MALAYSIA

PART I : ENGLISH

Dear Sir/Madam,

السلام عليكم ورحمة الله وبركاته

We are currently carrying out a survey on the involvement of Muslims' personal savings and investments in the financial market of Malaysia.

The objective is to assess Muslims' participation in savings and investments in the market. We are also to evaluate the possibilities of enhancing mobilisation and efficient allocation of Muslims resources in the country with the aim of increasing and widening its wealth distribution.

We would appreciate if you could spare us some time to answer all of the following questions by putting a tick (/) in the space provided which most closely matches your personal views.

Please be rest assured that all your answers will be treated in strictest confidence and you will remain completely anonymous.

Thank you.

Wassalam.

N.B. The term Muslims in this Questionnaire refers to all citizens of Malaysia who profess Islam as their religion, a large number of whom are Bumiputra.

FOR OFFICE USE ONLY

- | | |
|-----------------|---|
| 1. DATE | : |
| 2. DAY | : |
| 3. TIME BEGIN | : |
| 4. TIME END | : |
| 5. RESEARCHER | : |
| 6. CHECKED BY | : |
| 7. DATE CHECKED | : |

PART ONE - GENERAL BACKGROUND.

Q1 Do you live in an urban or rural area ?

- Urban
- Rural

☐1
☐2

Q2 Is your work place in an urban or rural area ?

- Urban
- Rural
- Both of the above

☐1
☐2
☐3

Q3 Do you regard yourself as having an urban or rural upbringing ?

- Urban
- Rural
- Both of the above

☐1
☐2
☐3

Q4 Which of the following language/s do you use most often in your daily work ?

(You may tick more than one)

- Bahasa Malaysia
- English
- Chinese
- Indian
- Others

☐1
☐2
☐3
☐4
☐5

Q5 Which of the following daily newspapers do you read (language) ? (You may tick more than one)

- Bahasa Malaysia
- English
- Chinese
- Indian
- Others

☐1
☐2
☐3
☐4
☐5

Q6 Do you normally listen to the daily news on television or radio ?

- Yes
- No
- Sometimes

☐1
☐2
☐3

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☐☐☐1-3

☐4

☐5

☐6

☐☐7-8

☐☐9-10

☐11

Q7 Which of the following news in the media interest you most ? (You may tick more than one)

- Sports ☐ 1
- Local news ☐ 2
- International news ☐ 3
- Entertainment ☐ 4
- Business/Financial reports ☐ 5
- Arts and Cultures ☐ 6
- Politics (National and International) ☐ 7
- All of the above ☐ 8

Q8 Can you name a few magazines that you read regularly ?

1213

PART TWO - YOUR OPINION OF POLICIES FOR MUSLIMS IN MALAYSIA.

Q9 In general how satisfied are you with the overall economic achievements of the Muslims in our country today ?

- Totally satisfied ☐ ¹
- Satisfied ☐ ²
- Neither satisfied nor dissatisfied ☐ ³
- Dissatisfied ☐ ⁴
- I don't know ☐ ⁵

Q10 Do you believe that it is important for a larger number of Muslims to get involved in the business world today (directly/indirectly) ?

- Strongly believe ☐ ¹
- Believe ☐ ²
- Neither believe nor disbelieve ☐ ³
- Disbelieve ☐ ⁴
- I don't know ☐ ⁵

Q11 Do you understand the basic objectives of the National Development Policy (NDP) that replaces the former New Economic Policy (NEP) ?

- Well understood ☐ ¹
- General understanding ☐ ²
- Little understanding ☐ ³
- Do not understand ☐ ⁴
- No comment ☐ ⁵

Q12 Do you understand the government visions of 2020 (especially its economic policies) ?

- Well understood ☐ ¹
- General understanding ☐ ²
- Little understanding ☐ ³
- Do not understand ☐ ⁴
- No comment ☐ ⁵

FOR OFFICE USE

☐ ¹⁴

☐ ¹⁵

☐ ¹⁶

☐ ¹⁷

Q13 Do you understand the government's objectives of introducing the ASN/ASB schemes ?

- Well understood ☐ ¹
- General understanding ☐ ²
- Little understanding ☐ ³
- Do not understand ☐ ⁴
- No comment ☐ ⁵

Q14 Are you aware of the government's efforts/policies toward increasing and distributing the wealth of the nation to the Muslims?

- Very well aware ☐ ¹
- Generally aware ☐ ²
- Not quite aware ☐ ³
- Not aware at all ☐ ⁴
- I don't know ☐ ⁵
- I don't think there is any such policy ☐ ⁶

☐ ¹⁸☐ ¹⁹

**PART THREE - YOUR OPINION OF THE
GOVERNMENT'S ECONOMIC POLICIES.**

Q15 In general how satisfied are you with the government's economic policies with respect to Muslims ?

- Totally satisfied ☐ ¹
- Satisfied ☐ ²
- Neither satisfied nor dissatisfied ☐ ³
- Dissatisfied ☐ ⁴
- I don't know ☐ ⁵

☐ ²⁰

Q16 How satisfied are you with the government's policies on the ASN/ASB schemes ?

- Totally satisfied ☐ ¹
- Satisfied ☐ ²
- Neither satisfied nor dissatisfied ☐ ³
- Dissatisfied ☐ ⁴
- I don't know ☐ ⁵

☐ ²¹

Q17 How satisfied are you with the government's efforts toward encouraging Muslims investment in the stock market ?

- Totally satisfied ☐ ¹
- Satisfied ☐ ²
- Neither satisfied nor dissatisfied ☐ ³
- Dissatisfied ☐ ⁴
- I don't know ☐ ⁵

☐ ²²

Q18 Do you agree that the ASN/ASB schemes have benefited most, for those whom you regard as already rich ?

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ²³

FOR OFFICE USE

Q19 Do you agree that the economic gap (wealth) within the Muslim community (intra-community) has widened during the last ten years or so ?

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

Q20 Do you agree that the government need to revise certain policies in order to narrow the differences in the wealth distribution among Muslims ?

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

Q21 Do you agree that the government should introduce forced-investment among the Muslims (such as increasing their EPF contributions, etc.) in order to increase their investment-participation in the market ?

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ²⁴☐ ²⁵☐ ²⁶

**PART FOUR - YOUR OPINION OF INVESTMENTS
AND THE STOCK-MARKET IN MALAYSIA.**

*Please state to what extent you agree or disagree
with the following statements.*

Q22 The stock market is one of the most important
means for a society to mobilise their resources
and improve their economic well-being.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ²⁷

Q23 Not many Muslims really understand or
appreciate the functions and working
mechanisms of the stock-market.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ²⁸

Q24 The government has not done enough to
encourage Muslims toward direct participation
and investments in the stock-market.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ²⁹

Q25 Religious reasons prevent a large number of
Muslims from participating in the stock-market.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³⁰

FOR OFFICE USE

Q26 Muslims who participated in the stock-market are more interested in the short-term capital-gain rather than long-term equity participation.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³¹

Q27 The stock-market is more a place for speculative short-term investments.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³²

Q28 It is better and less risky to invest in assets like houses, land or other business activities than the stock-market.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³³

Q29 A large percentage of Muslims who have not participated in the ASN/ASB schemes believe that the schemes indulge in illegitimate (haram) activities.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³⁴

Q30 If there exist an Islamic-based stock-market, a large number of Muslims would participate in its trading and holding of shares.

- Agree ☐ ¹
- Neither agree nor disagree ☐ ²
- Disagree ☐ ³
- I don't know ☐ ⁴

☐ ³⁵

Q31 What is your opinion of the existing stock market ?
(You may tick more than one)

- Unacceptable based on my understanding of the syariah ☐1
- Acceptable only if the counters are Islamically legitimate ☐2
- Acceptable because of circumstances in the country ☐3
- Islamically acceptable in its current form (nothing wrong with it) ☐4
- No definite rulings from Muslim scholars & with conflicting opinions ☐5
- Mixed feelings/ Confused ☐6
- No comment ☐7
- Others (please specify) ☐8

FOR OFFICE USE

			36-38
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PART FIVE - YOUR SAVINGS BACKGROUND.

Note : *Saving is defined as the difference between your income and your consumption. It is money that you put aside at your own disposal for some future use, in a bank or any institution that generally bears negligible risk of it being lost or depleted.*

Q32 Do you keep any savings ?

- Yes
- No

☐ ¹
☐ ²

If No, please go to Q39 on page 12.

Q33 How would you regard your savings pattern to be ?

- Monthly
- Regular but not monthly
- Irregular
- Others (please specify)

☐ ¹
☐ ²
☐ ³
☐ ⁴

Q34 Why do you save ? (You may tick more than one)

- To prepare for untoward incidents
- For future personal use
- To prepare for old age/retirement plans
- For children's education
- For future investment plans
- To perform Hajj
- All the above
- Others

☐ ¹
☐ ²
☐ ³
☐ ⁴
☐ ⁵
☐ ⁶
☐ ⁷
☐ ⁸

Q35 On the average, what % of your total income do you save each time ?

- Less than 5 %
- 5 - 10 %
- > 10 - 15 %
- More than 15%
- (Specify amount if you prefer)

☐ ¹
☐ ²
☐ ³
☐ ⁴

MR

FOR OFFICE USE

☐ ³⁹
☐ ⁴⁰

			41-43
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☐ ⁴⁴

FOR OFFICE USE

Q36 What is the total value of all your savings (excluding investments) as of date?

- Less than \$5000 ☐ ¹
- \$ 5000 - \$10,000 ☐ ²
- > \$10,000 - \$20,000 ☐ ³
- > \$20,000 - \$30,000 ☐ ⁴
- > \$30,000 - \$50,000 ☐ ⁵
- > \$50,000 - \$70,000 ☐ ⁶
- More than \$70,000 ☐ ⁷

☐ ⁴⁵

Q37 Which of the following institutions do you have your savings in ? (You may tick more than one)

- Commercial bank ☐ ¹
- Bank Islam Malaysia ☐ ²
- Co-operative/Building society ☐ ³
- Islamic Co-operative ☐ ⁴
- Life insurance (conventional) ☐ ⁵
- Syarikat Takaful Insurance ☐ ⁶
- Pilgrimage Fund Board ☐ ⁷
- Others (please specify) ☐ ⁸

☐ ☐ ☐ ⁴⁶⁻⁴⁸

Q38 Do you regard rate of return on your savings as an important criteria in your choice of institutions that you save ?

- Yes ☐ ¹
- No ☐ ²

☐ ⁴⁹

Q39 Which type of account/s do you keep in a bank? (You may tick more than one)

Bank Islam Malaysia :-

- Current account ☐ ¹
- Savings account ☐ ²
- Investment account ☐ ³
- Others ☐ ⁴

Other commercial Bank :-

- Current account ☐ ⁵
- Savings account ☐ ⁶
- Fixed Deposits ☐ ⁷
- Others ☐ ⁸

☐ ☐ ☐ ☐ ⁵⁰⁻⁵³

Q40 If you do have an account with Bank Islam Malaysia, which of the followings made you choose the bank ? (You may tick more than one)

- An interest-free bank ☐ ¹
- Media Influence ☐ ²
- Convenience ☐ ³
- Good service ☐ ⁴
- No specific reason ☐ ⁵
- No comment ☐ ⁶
- Others (please specify) ☐ ⁷

		54-55
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Q41 What is your opinion of the Bank Islam Malaysia? (You may tick more than one)

- A very promising bank with good potential and opportunities ☐ ¹
- Very professional in its approach of offering service and products ☐ ²
- It provides an alternative for those wishing to use Islamic Banking facilities ☐ ³
- A very competitive bank and as rigorous as any other bank ☐ ⁴
- Not truly an Islamic bank as I perceived ☐ ⁵
- Like any other commercial bank but using Islamic terminologies ☐ ⁶
- Not competitive enough relative to other commercial banks ☐ ⁷
- Lack professionalism in its execution of services and products marketing ☐ ⁸
- No comment ☐ ⁹
- Others (please specify) ☐ ¹⁰

				56-59
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PART SIX - YOUR INVESTMENTS BACKGROUND.

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Note : *Investment is defined as the commitment of money to buy an asset for a period of time in order to derive an expected higher future returns.*

Q42 Which of the following statement/s do you agree with ? (You may tick more than one)

- Savings is more important than investment ☐ ¹
- Investment is more important than savings ☐ ²
- Savings and investment are equally important ☐ ³
- Savings should supersede investments ☐ ⁴
- None of the above ☐ ⁵
- No comment ☐ ⁶

☐ ⁶⁰

Q43 Do you hold any form of investment ? (This includes the house you purchased and live in)

- Yes ☐ ¹
- No ☐ ²

☐ ⁶¹

If No, please go to PART SEVEN on page 19.

Q44 Which of the following form of investments do you hold ? (You may tick more than one)

- Houses or apartments (inclusive of the one you are living in) ☐ ¹
- Land (Agricultural/ Industrial/Development) ☐ ²
- Agricultural business (Animal husbandry/fruit orchards,etc.) ☐ ³
- Jewellery ☐ ⁴
- Business/Company (sole proprietorship/partnership) ☐ ⁵
- ASN/ASB shares ☐ ⁶
- Other shares on KLSE ☐ ⁷
- Others (please specify) ☐ ⁸

☐ ☐ ☐ ☐ ⁶²⁻⁶⁵

Q45 Of all the investments you hold, which of the following would you regard as most important to you ?

- Houses or apartments (inclusive of the one you are living in) ☐¹
- Land (Agricultural/Industrial/Development) ☐²
- Agricultural business (Animal husbandry/fruit orchards,etc.) ☐³
- Jewellery ☐⁴
- Business/Company (sole proprietorship/partnership) ☐⁵
- ASN/ASB shares ☐⁶
- Other shares on KLSE ☐⁷
- Others (please specify) ☐⁸

☐⁶⁶

Q46 How knowledgeable and well-informed are you in the investment that you have regarded as most important in Q45 ?

- Professional knowledge ☐¹
- Knowledgeable/well-informed ☐²
- General knowledge/generally informed ☐³
- Lack knowledge but well-advised ☐⁴
- Lack knowledge/not well-informed ☐⁵
- No knowledge ☐⁶
- No comment ☐⁷

☐⁶⁷

Q47 On the average, what % of your total annual income do you invest in a year ?

- Less than 5 % ☐¹
- 5 - 10 % ☐²
- > 10 - 15 % ☐³
- More than 15% ☐⁴
- (Specify amount if you prefer)

☐⁶⁸

MR

Q48 What is the total value of all your investments (excluding savings but including houses, land, etc) as of date?

- Less than \$25,000 ☐ 1
- \$ 25,000 - \$ 50,000 ☐ 2
- > \$ 50,000 - \$100,000 ☐ 3
- > \$100,000 - \$200,000 ☐ 4
- > \$200,000 - \$300,000 ☐ 5
- > \$300,000 - \$500,000 ☐ 6
- More than \$500,000 ☐ 7

☐ 69

Q49 Do you have any investment in the stock market ? (This includes shares of ASN/ASB)

- Yes ☐ 1
- No ☐ 2

☐ 70

If Yes, please go to Q51 on page 17.

Q50 Why don't you invest in the stock market ? (You may tick more than one)

- Religious belief prevents me ☐ 1
- Too risky an investment ☐ 2
- Not much knowledge of the stock market ☐ 3
- The KLSE is overly speculative ☐ 4
- Other investments offer higher returns relative to risks ☐ 5
- Not enough capital to make a worthwhile investment ☐ 6
- Brokers' transaction costs are too high ☐ 7
- Others (please specify) ☐ 8

☐ ☐ 71-72

Please go to PART SEVEN on page 19.

Q51 Of all the investments you hold what % lies in stocks and shares (including ASN/ASB shares)?

- Less than 5 % ☐ ¹
- 5 - 10 % ☐ ²
- > 10 - 20 % ☐ ³
- > 20 - 30 % ☐ ⁴
- > 30 - 50 % ☐ ⁵
- More than 50% ☐ ⁶

☐ ⁷³

Q52 How knowledgeable and well-informed are you of the stock market investments ?

- Professional knowledge ☐ ¹
- Knowledgeable/well-informed ☐ ²
- General knowledge/generally informed ☐ ³
- Lack knowledge but professionally-advised ☐ ⁴
- Lack knowledge/not well-informed ☐ ⁵
- No knowledge ☐ ⁶
- No comment ☐ ⁷

☐ ⁷⁴

Q53 Which of the following describe you best as an investor ?

- Long-term dividend-yield earner ☐ ¹
- Short-term capital-gain earner ☐ ²
- Active speculator ☐ ³
- All of the above ☐ ⁴
- None of the above ☐ ⁵
- I don't know ☐ ⁶

☐ ⁷⁵

Q54 Which of the following counters on the KLSE attract you most ? (You may tick more than one)

- Industrials ☐ ¹
- Finance ☐ ²
- Property ☐ ³
- Hotel ☐ ⁴
- Oil Palm ☐ ⁵
- Rubber ☐ ⁶
- Tin ☐ ⁷

☐ ☐ ⁷⁶⁻⁷⁷

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Q55 Do you hold any shares of Bank Islam Malaysia ?

- Yes

☐

- No

☐☐78

Q56 What is the average market value of all your shares (including ASN/ASB shares) ?

- Less than \$5000

☐

- \$ 5000 - \$10,000

☐

- > \$10,000 - \$20,000

☐

- > \$20000 - \$30,000

☐

- > \$30,000 - \$50,000

☐

- > \$50,000 - \$70,000

☐

- More than \$70,000

☐☐79

Q57 Do you have any investment in the ASN/ASB ?

- Yes

☐

- No

☐☐80

If No, please go to Q59 below.

Q58 Why do you invest in the ASN/ASB ?
(You may tick more than one)

- Less risky

☐

- Give a relatively high returns

☐

- Because it is a government
unit trust

☐

- Best value for money

☐

- All of the above

☐

- No comment

☐☐☐81-82

Please go to PART SEVEN on page 19.

Q59 Why don't you invest in the ASN/ASB ?

- Not eligible (Non-Bumiputra)

☐

- Other counters offer
higher returns

☐

- Because it involves unIslamic
transactions

☐

- Not enough capital (Need to
pay housing/car loans, etc)

☐

- Others (please specify)

☐☐83

PART SEVEN - ABOUT YOURSELF.

Q60 Religion ?

- Islam (Muslim)
- Non-Muslim

☐1
☐2

☐84

Q61 Race ?

- Bumiputra
- Non-Bumiputra

☐1
☐2

☐85

Q62 Sex ?

- Male
- Female

☐1
☐2

☐86

Q63 Age ?

- Between 21 - 30
- Between 30 - 40
- Between 40 - 50
- Between 50 - 55
- Above 55

☐1
☐2
☐3
☐4
☐5

☐87

Q64 Marital status ?

- Single
- Married
- Divorced
- Widow/Widower

☐1
☐2
☐3
☐4

☐88

Q65 Number of dependants ?

- Less than 5 persons
- Between 5 - 8 persons
- More than 8 persons

☐1
☐2
☐3

☐89

Q66 Educational background ?

- No formal education
- Primary school
- Secondary school
- Diploma/Certificate
- University graduate
- Professional Qualifications

☐1
☐2
☐3
☐4
☐5
☐6

☐90

FOR OFFICE USE

Q67 Occupation ? (Please state)

Which sector ?

- Private sector ☐ 1
- Public sector ☐ 2
- Semi-government ☐ 3

91-92

Q68 Number of years working ?

- Less than 5 years ☐ 1
- 5 - 10 years ☐ 2
- > 10 - 15 years ☐ 3
- More than 15 years ☐ 4

93

Q69 What is your gross monthly income ?

- Less than \$1000 ☐ 1
- \$1000 - \$3000 ☐ 2
- > \$3000 - \$6000 ☐ 3
- > \$6000 - \$9000 ☐ 4
- > \$9000 - \$12000 ☐ 5
- > \$12000 - \$15000 ☐ 6
- More than \$15000 ☐ 7

94

Q70 Is your wife/husband working ?

- Yes ☐ 1
- No ☐ 2

95

Q71 If Yes, what is your wife/husband gross monthly income ?

- Less than \$1000 ☐ 1
- \$1000 - \$3000 ☐ 2
- > \$3000 - \$6000 ☐ 3
- > \$6000 - \$9000 ☐ 4
- > \$9000 - \$12000 ☐ 5
- > \$12000 - \$15000 ☐ 6
- More than \$15000 ☐ 7

96

Thank You very much for your time and co-operation. The results will go a long way in suggesting toward policy reforms to enhance mobilisation and efficient allocation of Muslims capital resources and hence their economic well-being. May Allah bless you, InsyaAllah.

Wassalam.

**Kulliyyah of Economics,
International Islamic University,
P.O. Box 70, Jalan Sultan,
46700 Petaling Jaya,
Selangor,
Malaysia.**

BAHAGIAN II : BAHASA MALAYSIA

Saudara/i yang dihormati,

السلام عليكم ورحمة الله وبركاته

Kami sedang menjalankan satu kajian mengkaji selidik penglibatan umat Islam negara khususnya dalam aspek simpanan dan pelaburan mereka di dalam pasaran kewangan di Malaysia.

Matlamat kajian ini adalah untuk menilai penglibatan serta perkembangan dan pencapaian golongan tersebut di dalam pasaran kewangan kita. Kami juga ingin mengkaji dan mengenalpasti beberapa kemungkinan yang dapat meningkatkan lagi pengeralahan dana umat Islam negara serta menggunakan kaedah yang lebih berkesan di dalam penyaluran modal tersebut. Ini diharapkan akan menambah dan meluaskan lagi pengagihan kekayaan di kalangan umat.

Dengan demikian, besar harapan kami agar dapat saudara/i meluangkan sedikit masa untuk menjawab soal-selidik ini. Saudara/i boleh menandakan (/) pada kotak-kotak yang disediakan pada jawapan yang paling hampir dengan pandangan peribadi saudara/i.

Kami berjanji dan memberi jaminan dengan ikhlas bahawa kesemua jawapan yang diberikan akan disimpan dengan penuh rahsia tanpa pengetahuan mana-mana pihak sekalipun, melainkan mereka yang terlibat di dalam kajian ini. Semoga Allah membalas jasa baik saudara/i, InsyaAllah.

Terima kasih.

Wassalam

Nota : Istilah Umat Islam di dalam soal-selidik ini merujuk kepada semua warganegara Malaysia yang beragama Islam, yang sebilangan besarnya adalah kaum Bumiputra.

BAHAGIAN SATU - LATARBELAKANG UMUM

S1. Adakah anda tinggal di kawasan luar bandar atau dalam bandar?

- Dalam bandar
- Luar bandar

☐ ¹
☐ ²

S2. Adakah tempat anda bekerja di kawasan luar bandar atau dalam bandar?

- Dalam bandar
- Luar bandar
- Kedua-duanya sekali

☐ ¹
☐ ²
☐ ³

S3. Adakah anda diperbesarkan di kawasan luar bandar atau dalam bandar?

- Dalam bandar
- Luar bandar
- Kedua-duanya sekali

☐ ¹
☐ ²
☐ ³

S4. Apakah bahasa yang kerap anda gunakan di tempat kerja setiap hari? (Anda boleh tanda lebih dari satu)

- Bahasa Malaysia
- Bahasa Inggeris
- Bahasa Cina
- Bahasa Tamil
- Lain-lain bahasa

☐ ¹
☐ ²
☐ ³
☐ ⁴
☐ ⁵

S5. Akhbar bahasa apakah yang anda baca setiap hari? (Anda boleh tanda lebih dari satu)

- Bahasa Malaysia
- Bahasa Inggeris
- Bahasa Cina
- Bahasa Tamil
- Lain-lain bahasa

☐ ¹
☐ ²
☐ ³
☐ ⁴
☐ ⁵

S6. Adakah menjadi kebiasaan anda mendengar berita harian di televisyen atau radio?

- Ya
- Tidak
- Kadangkala

☐ ¹
☐ ²
☐ ³

KEGUNAAN PEJABAT

☐ ☐ ☐ ¹⁻³
☐ ⁴
☐ ⁵
☐ ⁶
☐ ☐ ⁷⁻⁸
☐ ☐ ⁹⁻¹⁰
☐ ¹¹

S7. Antara berita media-massa yang berikut, berita manakah yang paling anda minati? (Anda boleh tanda lebih dari satu)

- Berita sukan ☐ ¹
- Berita tempatan ☐ ²
- Berita antarabangsa ☐ ³
- Berita hiburan ☐ ⁴
- Berita kewangan/
perniagaan ☐ ⁵
- Berita seni dan kebudayaan ☐ ⁶
- Berita politik (tanahair dan
antarabangsa) ☐ ⁷
- Kesemua yang tersebut di atas ☐ ⁸

S8. Bolehkah anda senaraikan beberapa majalah yang lazim anda baca?

☐ ¹²☐ ¹³

BAHAGIAN DUA - PENDAPAT ANDA TERHADAP DASAR-DASAR YANG MELIBATKAN UMAT ISLAM MALAYSIA

S9. Pada umumnya, sejauh manakah anda berpuashati dengan pencapaian keseluruhan ekonomi umat Islam negara kita hari ini?

- Sangat berpuashati ☐ 1
- Berpuashati ☐ 2
- Di antara berpuashati dan tidak ☐ 3
- Tidak berpuashati ☐ 4
- Saya tidak tahu ☐ 5

☐ 14

S10. Adakah anda bersetuju bahawa adalah penting untuk sebilangan besar umat Islam menceburkan diri di dalam dunia perniagaan hari ini (samada secara langsung atau tidak)?

- Sangat bersetuju ☐ 1
- Bersetuju ☐ 2
- Di antara bersetuju dan tidak ☐ 3
- Tidak bersetuju ☐ 4
- Saya tidak tahu ☐ 5

☐ 15

S11. Adakah anda faham matlamat asas Dasar Pembangunan Negara (DPN) yang menggantikan Dasar Ekonomi Baru (DEB) yang lepas?

- Faham sungguh ☐ 1
- Faham secara umum ☐ 2
- Faham sedikit sahaja ☐ 3
- Tidak faham langsung ☐ 4
- Tiada komen ☐ 5

☐ 16

S12. Adakah anda faham Wawasan 2020 kerajaan (khasnya yang berkaitan dengan dasar ekonomi)?

- Faham sungguh ☐ 1
- Faham secara umum ☐ 2
- Faham sedikit sahaja ☐ 3
- Tidak faham langsung ☐ 4
- Tiada komen ☐ 5

☐ 17

KEGUNAAN PEJABAT

S13. Adakah anda faham beberapa matlamat kerajaan di dalam melancarkan skim-skim ASN/ASB?

- Faham sungguh ☐ ¹
- Faham secara umum ☐ ²
- Faham sedikit sahaja ☐ ³
- Tidak faham langsung ☐ ⁴
- Tiada komen ☐ ⁵

☐ ¹⁸

S14. Adakah anda menyedari akan dasar dan usaha-usaha kerajaan ke arah meningkat dan mengagihkan kekayaan negara kepada umat Islam keseluruhannya?

- Menyedari sungguh ☐ ¹
- Menyedari secara umum ☐ ²
- Menyedari sebahagiannya ☐ ³
- Tidak menyedari langsung ☐ ⁴
- Tiada komen ☐ ⁵
- Saya tidak yakin wujudnya dasar/usaha sedemikian ☐ ⁶

☐ ¹⁹

**BAHAGIAN TIGA - PENDAPAT ANDA TERHADAP
DASAR EKONOMI KERAJAAN/NEGARA**

S15. Pada umumnya, sejauh manakah anda berpuashati dengan dasar ekonomi kerajaan yang berkaitan dengan umat Islam?

- Sangat berpuashati ☐¹
- Berpuashati ☐²
- Di antara berpuashati dan tidak ☐³
- Tidak berpuashati ☐⁴
- Saya tidak tahu ☐⁵

☐²⁰

S16. Sejauh manakah anda berpuashati dengan dasar kerajaan berhubung dengan sekim-sekim ASN/ASB?

- Sangat berpuashati ☐¹
- Berpuashati ☐²
- Di antara berpuashati dan tidak ☐³
- Tidak berpuashati ☐⁴
- Saya tidak tahu ☐⁵

☐²¹

S17. Sejauh manakah anda berpuashati dengan usaha-usaha kerajaan ke arah menggalakkan penglibatan umat Islam untuk melabur di dalam pasaran saham?

- Sangat berpuashati ☐¹
- Berpuashati ☐²
- Di antara berpuashati dan tidak ☐³
- Tidak berpuashati ☐⁴
- Saya tidak tahu ☐⁵

☐²²

S18. Adakah anda bersetuju bahawa sekim-sekim ASN/ASB amat sangat menguntungkan golongan yang anda anggap telahpun menjadi kaya?

- Bersetuju ☐¹
- Di antara bersetuju dan tidak ☐²
- Tidak bersetuju ☐³
- Saya tidak tahu ☐⁴

☐²³

KEGUNAAN PEJABAT

S19. Adakah anda bersetuju bahawa jurang perbezaan kekayaan di kalangan umat Islam sendiri telah menjadi bertambah besar sejak sepuluh tahun yang lepas atau kebelakangan ini?

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

S20. Adakah anda bersetuju bahawa kerajaan perlu meminda atau mengubahsuai beberapa dasar tertentu bagi merapatkan jurang perbezaan ini di dalam usaha pengagihan kekayaan di kalangan umat Islam?

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

S21. Adakah anda bersetuju bahawa kerajaan sepatutnya memperkenalkan sekim pelaburan-wajib di kalangan umat Islam (umpamanya dengan meninggikan caruman KWSP, dll.) untuk meningkatkan penglibatan pelaburan mereka di dalam pasaran?

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ 24

☐ 25

☐ 26

BAHAGIAN EMPAT - PENDAPAT ANDA TENTANG
PELABURAN DAN PASARAN SAHAM DI MALAYSIA

Sila nyatakan sejauh mana anda bersetuju atau tidak,
pada tiap-tiap ayat berikut.

S22. Pasaran saham adalah merupakan salah satu cara
yang amat penting bagi sesebuah masyarakat
mengarahkan modal untuk meningkatkan prestasi
pencapaian ekonomi mereka.

- Bersetuju ☐ 1
- Di antara bersetuju dan tidak ☐ 2
- Tidak bersetuju ☐ 3
- Saya tidak tahu ☐ 4

S23. Tidak ramai dari kalangan umat Islam yang benar-
benar memahami atau menghargai fungsi atau
mekanisme perjalanan pasaran saham.

- Bersetuju ☐ 1
- Di antara bersetuju dan tidak ☐ 2
- Tidak bersetuju ☐ 3
- Saya tidak tahu ☐ 4

S24. Pihak kerajaan masih belum menggalakkan umat
Islam dengan secukupnya untuk melabur dan
melibatkan diri secara langsung di dalam pasaran
saham.

- Bersetuju ☐ 1
- Di antara bersetuju dan tidak ☐ 2
- Tidak bersetuju ☐ 3
- Saya tidak tahu ☐ 4

S25. Pegangan agama merupakan antara alasan yang
menghalang/ membantutkan keinginan sebilangan
besar umat Islam untuk melibatkan diri di dalam
pasaran saham.

- Bersetuju ☐ 1
- Di antara bersetuju dan tidak ☐ 2
- Tidak bersetuju ☐ 3
- Saya tidak tahu ☐ 4

KEGUNAAN PEJABAT

☐ 27☐ 28☐ 29☐ 30

S26. Umat Islam yang melibatkan diri di dalam pasaran saham lebih berminat untuk meraih keuntungan jangka masa pendek daripada penglibatan equiti jangka masa panjang.

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ ³¹

S27. Pasaran saham lebih merupakan satu tempat untuk pelaburan-spekulasi jangka masa pendek.

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ ³²

S28. Adalah lebih baik dan kurang risikonya untuk kita melabur di dalam aset seperti rumah, tanah atau lain-lain bidang perniagaan daripada melabur di dalam pasaran saham.

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ ³³

S29. Sebahagian besar dari kalangan umat Islam yang tidak melabur di dalam sekim-sekim ASN/ASB mempercayai bahawa sekim-sekim tersebut terbabit di dalam pelaburan yang tidak halal.

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ ³⁴

S30. Jika wujud sebuah pasaran-saham yang berlandaskan Islam (syariah), sebahagian besar dari kalangan umat Islam akan menerimanya dan melibatkan diri mereka di dalam perniagaan jual-beli saham.

- Bersetuju ☐ ¹
- Di antara bersetuju dan tidak ☐ ²
- Tidak bersetuju ☐ ³
- Saya tidak tahu ☐ ⁴

☐ ³⁵

S31. Apakah pendapat anda terhadap pasaran saham yang sedia ada kini? (Anda boleh tanda lebih dari satu)

- Tidak dapat diterima berdasarkan atas fahaman saya di dalam syariah Islam ☐¹
- Boleh diterima dengan syarat saham-saham yang dibeli adalah halal dari sudut Islam ☐²
- Boleh diterima oleh kerana keadaan tertentu negara ☐³
- Boleh diterima di dalam keadaannya kini (tidak ada masaalahnya) ☐⁴
- Tidak ada kenyataan hukum yang jelas dari kalangan ulamak dan pandangan mereka amat mengelirukan ☐⁵
- Mempunyai pelbagai tanggapan/kebingungan ☐⁶
- Tiada komen ☐⁷
- Lain-lain (sila nyatakan) ☐⁸

☐☐☐ 36-38

BAHAGIAN LIMA - PERIHAL SIMPANAN ANDA

Nota : *Simpanan di sini membawa maksud lebih pendapatan anda setelah ditolak perbelanjaan. Ianya merupakan wang yang anda asingkan dan simpan untuk kegunaan masa depan, samada di dalam bank atau sebuah institusi tanpa risiko ia akan hilang atau luput.*

S32. Adakah anda mempunyai apa-apa simpanan?

- Ya ☐ ¹
- Tidak ☐ ²

Jika Tidak, sila tuju ke S39 di mukasurat 12.

S33. Bagaimanakah anda menganggap tabiat simpanan anda?

- Bulanan ☐ ¹
- Kerap tetapi bukan bulanan ☐ ²
- Tidak kerap ☐ ³
- Lain-lain (sila nyatakan) ☐ ⁴

S34. Mengapakah anda menyimpan?

(Anda boleh tanda lebih dari satu)

- Persediaan untuk keadaan malang ☐ ¹
- Untuk kegunaan peribadi masa hadapan ☐ ²
- Persediaan masa tua/selepas pencen ☐ ³
- Untuk pembelajaran anak-anak ☐ ⁴
- Untuk rancangan pelaburan kelak ☐ ⁵
- Untuk menunaikan Haji ☐ ⁶
- Kesemua tersebut di atas ☐ ⁷
- Lain-lain ☐ ⁸

S35. Secara purata, berapa peratuskah % daripada pendapatan bulanan anda yang disimpan setiap kali?

- Kurang dari 5% ☐ ¹
- 5 - 10% ☐ ²
- >10-15% ☐ ³
- Lebih dari 15% ☐ ⁴
- (Sila nyatakan jumlah simpanan jika ingin)

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KEGUNAAN PEJABAT

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⁴¹⁻⁴³☐ ⁴⁴

S36. Apakah jumlah nilai simpanan anda keseluruhannya sehingga hari ini (tanpa mencampurkan pelaburan)?

- Kurang dari \$5,000 ☐ ¹
- \$ 5,000 - \$10,000 ☐ ²
- >\$10,000 - \$20,000 ☐ ³
- >\$20,000 - \$30,000 ☐ ⁴
- >\$30,000 - \$50,000 ☐ ⁵
- >\$50,000 - \$70,000 ☐ ⁶
- Lebih dari \$70,000 ☐ ⁷

S37. Dari senarai yang berikut, sila nyatakan institusi yang manakah yang anda punyai simpanan? (Anda boleh tanda lebih dari satu)

- Bank komersil biasa ☐ ¹
- Bank Islam Malaysia ☐ ²
- Koperasi/Building society ☐ ³
- Koperasi Islam ☐ ⁴
- Insuran nyawa (syarikat biasa) ☐ ⁵
- Insuran Syarikat Takaful ☐ ⁶
- Lembaga Urusan Tabung Haji ☐ ⁷
- Lain-lain (Sila nyatakan) ☐ ⁸

S38. Adakah anda menganggap kadar pulangan/faedah kepada simpanan anda sebagai kriteria penting di dalam pemilihan institusi yang anda simpan?

- Ya ☐ ¹
- Tidak ☐ ²

S39. Jenis akaun yang manakah yang anda simpan di dalam bank?

Bank Islam Malaysia:-

- Akaun semasa ☐ ¹
- Akaun simpanan ☐ ²
- Akaun pelaburan ☐ ³
- Lain-lain ☐ ⁴

Bank komersil lain:-

- Akaun semasa ☐ ⁵
- Akaun simpanan ☐ ⁶
- Simpanan tetap ☐ ⁷
- Lain-lain ☐ ⁸

☐ 45

☐ ☐ ☐ 46-48

☐ 49

☐ ☐ ☐ ☐ 50-53

S40. Jika anda mempunyai akaun di Bank Islam Malaysia, atas alasan apakah yang mendorong anda untuk memilih bank tersebut?

(Anda boleh tanda lebih dari satu)

- Bank yang tidak melibatkan riba ☐¹
- Pengaruh media massa ☐²
- Mudah untuk ke Bank ☐³
- Perkhidmatan yang baik ☐⁴
- Tanpa alasan tertentu ☐⁵
- Tiada komen ☐⁶
- Lain-lain (sila nyatakan) ☐⁷

S41. Apakah pendapat anda terhadap Bank Islam Malaysia? (Anda boleh tanda lebih dari satu)

- Bank yang berpotensi mempunyai peluang dan masa depan yang cerah ☐¹
- Sungguh profesyenal di dalam layanan perkhidmatannya ☐²
- Memberi pilihan kepada mereka yang inginkan perkhidmatan Bank Islam ☐³
- Sebuah bank yang memberi saingan hebat seperti bank-bank lain ☐⁴
- Bukan sebuah bank yang benar-benar Islamik seperti yang saya fahami ☐⁵
- Seperti bank komersil yang lain tetapi hanya menggunakan istilah-istilah Islam ☐⁶
- Tidak memberikan saingan yang kuat berbanding dengan bank-bank lain ☐⁷
- Tidak begitu profesyenal di dalam perkhidmatan dan pasarannya ☐⁸
- Tiada komen ☐⁹
- Lain-lain (sila nyatakan) ☐¹⁰

		54-55
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				56-59
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BAHAGIAN ENAM - PERIHAL PELABURAN ANDA

Nota: *Pelaburan di sini membawa maksud komitmen membeli sesuatu aset untuk suatu jangkamasa dengan tujuan untuk meraih keuntungan di masa hadapan.*

S42. Di antara ayat-ayat yang berikut, ayat yang manakah yang anda bersetuju? (Anda boleh tanda lebih dari satu)

- Simpanan adalah lebih penting daripada pelaburan ☐¹
- Pelaburan adalah lebih penting daripada simpanan ☐²
- Simpanan dan pelaburan adalah sama-sama penting ☐³
- Simpanan sepatutnya mendahului pelaburan ☐⁴
- Tidak setuju kesemua di atas ☐⁵
- Tiada komen ☐⁶

S43. Adakah anda mempunyai apa-apa pelaburan? (Ini termasuk rumah yang anda beli dan tinggal di dalamnya)

- Ya ☐¹
- Tidak ☐²

Jika Tidak, sila tuju ke Bahagian Tujuh di muka surat 19.

S44. Pelaburan dalam bentuk manakah yang anda punyai? (Anda boleh tanda lebih dari satu)

- Rumah atau pangsapuri (termasuk yang anda beli dan tinggal) ☐¹
- Tanah (Pertanian/Industri/Pembangunan) ☐²
- Perniagaan pertanian (Ternakan, dusun, dll) ☐³
- Barang-barang kemas ☐⁴
- Perniagaan/Syarikat (persendirian/perkongsian) ☐⁵
- Saham ASN/ASB ☐⁶
- Saham-saham lain di BSKL ☐⁷
- Lain-lain (sila nyatakan) ☐⁸

KEGUNAAN PEJABAT

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62-65

S45. Di antara kesemua pelaburan yang anda punyai, yang manakah yang anda anggap sebagai yang terpenting kepada anda?

- Rumah atau pangsapuri (termasuk yang anda beli dan tinggal) ☐¹
- Tanah (Pertanian/Industri/Pembangunan) ☐²
- Perniagaan pertanian (Ternakan, dusun, dll) ☐³
- Barang-barang kemas ☐⁴
- Perniagaan/Syarikat (persendirian/perkongsian) ☐⁵
- Saham ASN/ASB ☐⁶
- Saham-saham lain di BSKL ☐⁷
- Lain-lain (sila nyatakan) ☐⁸

☐⁶⁶

S46. Sejauh manakah pengetahuan dan makluman anda terhadap pelaburan yang dianggap terpenting di dalam soalan 45?

- Pengetahuan profesyenal ☐¹
- Mengetahui/Dimaklumkan secukupnya ☐²
- Pengetahuan umum/Makluman umum ☐³
- Tiada pengetahuan tetapi dinasihati secukupnya ☐⁴
- Tiada pengetahuan dan tidak dinasihati ☐⁵
- Tiada pengetahuan langsung ☐⁶
- Tiada komen ☐⁷

☐⁶⁷

S47. Secara purata, berapa peratuskah % daripada pendapatan tahunan anda yang dilabur dalam setahun?

- Kurang dari 5% ☐¹
- 5 - 10% ☐²
- >10-15% ☐³
- Lebih dari 15% ☐⁴
- (Sila nyatakan jumlah simpanan jika ingin)

☐⁶⁸

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S48. Apakah jumlah nilai pelaburan anda keseluruhannya sehingga hari ini (tanpa mencampurkan simpanan tetapi termasuk nilai rumah, tanah, dll.)?

- Kurang dari \$25,000 ☐ ¹
- \$ 25,000 - \$ 50,000 ☐ ²
- >\$ 50,000 - \$100,000 ☐ ³
- >\$100,000 - \$200,000 ☐ ⁴
- >\$200,000 - \$300,000 ☐ ⁵
- >\$300,000 - \$500,000 ☐ ⁶
- Lebih dari \$500,000 ☐ ⁷

S49. Adakah anda mempunyai apa-apa pelaburan di dalam pasaran saham?

(Ini termasuk saham-saham ASN/ASB)

- Ya ☐ ¹
- Tidak ☐ ²

Jika Ya, sila tuju ke S51 di muka surat 17.

S50. Mengapakah anda tidak melabur di dalam pasaran saham? (Anda boleh tanda lebih dari satu)

- Pegangan agama menghalang saya ☐ ¹
- Tiada pengetahuan tentang selok-belok pasaran saham ☐ ²
- Pelaburan yang terlalu tinggi risikonya ☐ ³
- BSKL adalah terlalu spekulatif ☐ ⁴
- Pelaburan lain menawarkan pulangan yang lebih tinggi relatif kepada risikonya ☐ ⁵
- Modal tidak mencukupi untuk membuat pelaburan yang bermakna ☐ ⁶
- Kos perkhidmatan broker terlalu tinggi ☐ ⁷
- Lain-lain (sila nyatakan) ☐ ⁸

☐ ⁶⁹

☐ ⁷⁰

☐ ☐ ⁷¹⁻⁷²

Sila tuju ke Bahagian Tujuh di muka surat 19.

S51. Dari keseluruhan pelaburan yang anda punyai, berapa peratuskah % terletak di dalam pelaburan saham (termasuk saham ASN/ASB)?

- Kurang dari 5% ☐ ¹
- 5 - 10% ☐ ²
- >10 - 20% ☐ ³
- >20 - 30% ☐ ⁴
- >30 - 50% ☐ ⁵
- Lebih dari 50% ☐ ⁶

☐ ⁷³

S52. Sejauh manakah pengetahuan dan makluman anda terhadap pelaburan pasaran saham?

- Pengetahuan profesyenal ☐ ¹
- Mengetahui/Dimaklumkan
secukupnya ☐ ²
- Pengetahuan umum/Makluman
umum ☐ ³
- Tiada pengetahuan tetapi dinasihati
secukupnya ☐ ⁴
- Tiada pengetahuan dan tidak
dinasihati ☐ ⁵
- Tiada pengetahuan langsung ☐ ⁶
- Tiada komen ☐ ⁷

☐ ⁷⁴

S53. Bagaimanakah anda menggolongkan diri anda sebagai seorang pelabur?

- Pelabur jangka masa panjang yang
meraih keuntungan dividen ☐ ¹
- Pelabur jangka masa pendek meraih
keuntungan modal (capital-gain) ☐ ²
- Spekulator yang aktif ☐ ³
- Kesemua tersebut di atas ☐ ⁴
- Tiada yang tersebut di atas ☐ ⁵
- Saya tidak tahu ☐ ⁶

☐ ⁷⁵

S54. Di antara kaunter-kaunter BSKL yang berikut, kaunter yang manakah yang paling anda minati? (Anda boleh tanda lebih dari satu)

- Industri ☐ ¹
- Kewangan ☐ ²
- Harta ☐ ³
- Hotel ☐ ⁴
- Kelapa Sawit ☐ ⁵
- Getah ☐ ⁶
- Bijih Timah ☐ ⁷

☐ ☐ ⁷⁶⁻⁷⁷

S55. Adakah anda seorang pemegang saham Bank Islam Malaysia?

- Ya ☐ ¹
- Tidak ☐ ²

S56. Apakah nilai purata pasaran kesemua saham-saham anda (termasuk saham ASN/ASB)?

- Kurang dari \$5,000 ☐ ¹
- \$ 5,000 - \$10,000 ☐ ²
- >\$10,000 - \$20,000 ☐ ³
- >\$20,000 - \$30,000 ☐ ⁴
- >\$30,000 - \$50,000 ☐ ⁵
- >\$50,000 - \$70,000 ☐ ⁶
- Lebih dari \$70,000 ☐ ⁷

S57. Adakah anda mempunyai apa-apa pelaburan di dalam ASN/ASB?

- Ya ☐ ¹
- Tidak ☐ ²

Jika Tidak, sila tuju ke soalan 59 di bawah.

S58. Mengapakah anda melabur di dalam ASN/ASB? (Anda boleh tanda lebih dari satu)

- Risiko yang kecil ☐ ¹
- Ia memberi pulangan relatif yang tinggi ☐ ²
- Oleh kerana ianya amanah saham anjuran kerajaan ☐ ³
- Pilihan terbaik untuk pelaburan ☐ ⁴
- Kesemuanya di atas ☐ ⁵
- Tiada komen ☐ ⁶

Sila terus ke Bahagian Tujuh di mukasurat 19.

S59. Mengapakah anda tidak melabur di dalam ASN/ASB?

- Tidak layak (Bukan Bumiputra) ☐ ¹
- Kaunter (Saham) lain menawarkan pulangan yang lebih tinggi ☐ ²
- Oleh kerana ia melibatkan jualbeli yang tidak Islamik ☐ ³
- Modal yang tidak mencukupi (perlu menjelaskan hutang rumah/ kereta, dll.) ☐ ⁴
- Lain-lain (Sila nyatakan) ☐ ⁵

KEGUNAAN PEJABAT

☐ ⁷⁸☐ ⁷⁹☐ ⁸⁰☐ ☐ ⁸¹⁻⁸²☐ ⁸³

BAHAGIAN TUJUH - PERIHAL ANDA

S60. Agama?

- Islam
- Bukan Islam

☐ ¹
☐ ²

S61. Kaum/Golongan

- Bumiputra
- Bukan Bumiputra

☐ ¹
☐ ²

S62. Jantina?

- Lelaki
- Perempuan

☐ ¹
☐ ²

S63. Umur?

- Lingkungan 21-30
- Lingkungan 30-40
- Lingkungan 40-50
- Lingkungan 50-55
- Lebih dari 55

☐ ¹
☐ ²
☐ ³
☐ ⁴
☐ ⁵

S64. Kedudukan Kelamin?

- Bujang
- Berkahwin
- Berceraai
- Balu (Janda/Duda)

☐ ¹
☐ ²
☐ ³
☐ ⁴

S65. Jumlah bilangan tanggungan?

- Kurang dari 5 orang
- Di antara 5 hingga 8 orang
- Lebih dari 8 orang

☐ ¹
☐ ²
☐ ³

S66. Latarbelakang pencapaian pendidikan?

- Tanpa pendidikan formal
- Sekolah rendah
- Sekolah menengah
- Diploma/Sijil
- Lulusan Universiti
- Ijazah profesional

☐ ¹
☐ ²
☐ ³
☐ ⁴
☐ ⁵
☐ ⁶

KEGUNAAN PEJABAT

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☐ ⁸⁵
☐ ⁸⁶
☐ ⁸⁷
☐ ⁸⁸
☐ ⁸⁹
☐ ⁹⁰

S67. Pekerjaan? (Sila nyatakan)

Sektor mana?

- Sektor swasta ☐ ¹
- Sektor awam ☐ ²
- Badan berkanun/separa-awam ☐ ³

S68. Berapa lama anda sudah bekerja?

- Kurang dari 5 tahun ☐ ¹
- 5 - 10 tahun ☐ ²
- >10 - 15 tahun ☐ ³
- Lebih dari 15 tahun ☐ ⁴

S69. Apakah pendapatan kasar anda sebulan?

- Kurang dari \$1,000 ☐ ¹
- \$1,000 - \$ 3,000 ☐ ²
- >\$3,000 - \$ 6,000 ☐ ³
- >\$6,000 - \$ 9,000 ☐ ⁴
- >\$9,000 - \$12,000 ☐ ⁵
- >12,000 - \$15,000 ☐ ⁶
- Lebih dari \$15,000 ☐ ⁷

S70. Adakah isteri/suami anda bekerja?

- Ya ☐ ¹
- Tidak ☐ ²

S71. Jika Ya, apakah pendapatan kasar isteri/suami anda sebulan?

- Kurang dari \$1,000 ☐ ¹
- \$1,000 - \$ 3,000 ☐ ²
- >\$3,000 - \$ 6,000 ☐ ³
- >\$6,000 - \$ 9,000 ☐ ⁴
- >\$9,000 - \$12,000 ☐ ⁵
- >12,000 - \$15,000 ☐ ⁶
- Lebih dari \$15,000 ☐ ⁷

KEGUNAAN PEJABAT

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Ribuan terima kasih kami ucapkan di atas kerjasama dan kesudian anda meluangkan masa untuk kami. InsyaAllah hasil kajian ini akan memainkan peranan ke arah pengubahsuaian dasar bagi menambah dan meluaskan lagi pengagihan kekayaan negara di kalangan umat Islam. Ini dapat tercapai dengan mengenalpasti dan melaksanakan kaedah menyalurkan modal umat Islam dengan lebih berkesan. Semoga Allah memberkati jasa baik saudara/i, InsyaAllah.

Wassalam.

Kulliyyah of Economics,
International Islamic University,
P.O. Box 70, Jalan Sultan,
46700 Petaling Jaya,
Selangor,
Malaysia.

COMMENTS/KOMEN



COMMENTS/KOMEN

COMMENTS/KOMEN

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APPENDIX D

SUMMARY OF VARIABLE LABELS USED IN ALL STATISTICAL ANALYSES

Appendix D1: In the Order of the Questionnaire

PART ONE - GENERAL BACKGROUND.

Q1 Do you live in an urban or rural area ? **LIVING**

Q2 Is your work place in an urban or rural area ? **WRKPLACE**

Q3 Do you regard yourself as having urban or rural upbringing ? **GROWUP**

Q4 Which of the following language/s do you use most often in your daily work ?
WRKLNG

Q5 Which of the following daily newspapers do you read (language) ? **NPRLNG**

Q6 Do you normally listen to the daily news on television or radio ? **NEWSLSTN**

Q7 Which of the following news in the media interest you most ? **NEWSINTR**

Q8 Can you name a few magazines that you read regularly ? **MAGAZINE**

PART TWO - YOUR OPINION OF THE MUSLIMS & ITS RELATED POLICIES IN MALAYSIA.

Q9 In general how satisfied are you with the overall economic achievements of the Muslims in our country today ? **ECONACHV**

Q10 Do you believe that it is important for a larger number of Muslims to get involved in the business world today (directly/indirectly) ? **BIZINVL**

Q11 Do you understand the basic objectives of the National Development Policy (NDP) that replaces the former New Economic Policy (NEP) ? **NDPOBJ**

Q12 Do you understand the government visions of 2020 (especially its economic policies) ? **VISION20**

Q13 Do you understand the government's objectives of introducing the ASN/ASB schemes ? **ASNBOBJ**

Q14 Are you aware of the government's efforts/policies toward increasing and distributing the wealth of the nation to the Muslims? **WELTDSBN**

PART THREE - YOUR OPINION OF THE GOVERNMENT'S ECONOMIC POLICIES.

Q15 In general how satisfied are you with the government's economic policies with respect to the Muslims ? **ECONPLCS**

Q16 How satisfied are you with the government's policies on the ASN/ASB schemes ?
ASNSCHME

Q17 How satisfied are you with the government's efforts toward encouraging Muslims investment in the stock market ? **MSMINVS**

Q18 Do you agree that the ASN/ASB schemes have mostly benefited those whom you regard as already rich ? **ASNBNFT**

Q19 Do you agree that the economic gap (wealth) within the Muslim community (intra-community) has widened during the last ten years or so ? **GAPWIDEN**

Q20 Do you agree that the government need to revise certain policies in order to narrow the differences in the wealth distribution among the Muslims ? **REVPLCS**

Q21 Do you agree that the government should introduce forced-investment among the Muslims (such as increasing their EPF contributions) in order to increase their investment-participation in the market ? **FOSINVS**

PART FOUR - YOUR OPINION OF INVESTMENTS AND THE STOCK-MARKET IN MALAYSIA.

Q22 The stock market is one of the most important means for a society to mobilise their resources and improve their economic well-being. **SMIMPT**

Q23 Not many Muslims really understand or appreciate the functions and working mechanisms of the stock-market. **MSMKNWL**

Q24 The government has not done enough to encourage Muslims toward direct participation and investments in the stock-market. **SMENCRG**

Q25 Religious reasons prevent a large number of Muslims from participating in the stock-market. **SMRLGN**

Q26 Muslims who participated in the stock-market are more interested in the short-term capital-gain rather than long-term equity participation. **SMSTINVS**

Q27 The stock-market is more a place for speculative short-term investments. **SMSPEC**

Q28 It is better and less risky to invest in assets like houses, land or other business activities than the stock-market. **SMRISKY**

Q29 A large percentage of Muslims who have not participated in the ASN/ASB schemes believe that the schemes indulge in illegitimate (haram) activities.

ASNHARAM

Q30 If there exist an Islamic-based stock-market, a large number of Muslims would participate in its trading and holding of shares. **SMISLAM**

Q31 What is your opinion of the existing stock market ? **SMOPN**

PART FIVE - YOUR SAVINGS BACKGROUND.

Q32 Do you keep any savings ? **SAVINGS**

Q33 How would you regard your savings pattern to be ? **SVPATTEN**

Q34 Why do you save ? **WHYSAVE**

Q35 On the average, what % of your total income do you save each time ? **SVPRCN**

Q36 What is the total value of all your savings (excluding investments) as of date ?
SVTOTAL

Q37 Which of the following institutions do you have your savings in ? **SVINST**

Q38 Do you regard rate of return on your savings as an important criteria in your choice of institutions that you save ? **SVRETURN**

Q39 Which type of account/s do you keep in a bank ? **BNKACC**

Q40 If you do have an account with the Islamic bank, which of the followings made you choose the bank ? **WHYISBK**

Q41 What is your opinion of the Islamic Bank in Malaysia ? **ISBKOPN**

PART SIX - YOUR INVESTMENTS BACKGROUND.

Q42 Which of the following statement/s do you agree with ? **SVORINVS**

Q43 Do you hold any form of investment ? (This includes the house you purchased and live in) **ANYINVS**

Q44 Which of the following form of investments do you hold ? (You may tick more than one) **INVSTYP**

Q45 Of all the investments you hold, which of the following would you regard as most important to you ? **IMPTINVS**

Q46 How knowledgeable and well-informed are you in the investment that you have regarded as most important in Q45 ? **INVSKNWL**

Q47 On the average, what % of your total annual income do you invest in a year ?
INVSPRCN

Q48 What is the total value of all your investments (excluding savings but including houses, land, etc.) as of date ? **INVSTOTL**

Q49 Do you have any investment in the stock market ? (This includes shares of ASN/ASB) **SMINVS**

Q50 Why don't you invest in the stock market ? **NOSMINV**

Q51 Of all the investments you hold what % lies in stocks and shares (including ASN/ASB shares)? **ASNPRCN**

Q52 How knowledgeable and well-informed are you of the stock market investments ?
SMKNWL

Q53 Which of the following describe you best as an investor ? **INVSCHR**

Q54 Which of the following counters on the KLSE attract you most ? **CNTRATT**

Q55 Do you hold any shares of the Islamic bank ? **ISBKSHRE**

Q56 What is the average market value of all your shares (including ASN/ASB shares) ?
SHREVAL

Q57 Do you have any investment in the ASN/ASB ? **INVASNB**

Q58 Why do you invest in the ASN/ASB ? **YINVASN**

Q59 Why don't you invest in the ASN/ASB ? **YNOASN**

PART SEVEN - ABOUT YOURSELF.

Q60 Religion ? **RELIGION**

Q61 Race ? **RACE**

Q62 Sex ? **SEX**

Q63 Age ? **AGE**

Q64 Marital status ? **MARITAL**

Q65 Number of dependants ? **DEPNDNT**

Q66 Educational background ? **EDUC**

Q67 Occupation ? (Please state) **OCCPN1**
Which sector ? **OCCPN2**

Q68 Number of years working ? **YRSWRK**

Q69 What is your average monthly income ? **MTHINC**

Q70 Is your wife/husband working ? **SPOSWRK**

Q71 If Yes, what is your wife/husband average monthly income ? **SPOSINC**

Appendix D2: In the Alphabetical Order of the Variable Labels

AGE Q63 Age ?

ANYINVS Q43 Do you hold any form of investment ? (This includes the house you purchased and live in)

ASNBNFT Q18 Do you agree that the ASN/ASB schemes have mostly benefited those whom you regard as already rich ?

ASNBOBJ Q13 Do you understand the government's objectives of introducing the ASN/ASB schemes ?

ASNHARAM Q29 A large percentage of Muslims who have not participated in the ASN/ASB schemes believe that the schemes indulge in illegitimate (haram) activities.

ASNPRCN Q51 Of all the investments you hold what % lies in stocks and shares (including ASN/ASB shares)?

ASNSCHME Q16 How satisfied are you with the government's policies on the ASN/ASB schemes ?

BIZINVL Q10 Do you believe that it is important for a larger number of Muslims to get involved in the business world today (directly/indirectly) ?

BNKACC Q39 Which type of account/s do you keep in a bank ?

CNTRATT Q54 Which of the following counters on the KLSE attract you most ?

DEPDNT Q65 Number of dependants ?

ECONACHV Q9 In general how satisfied are you with the overall economic achievements of the Muslims in our country today ?

ECONPLCS Q15 In general how satisfied are you with the government's economic policies with respect to the Muslims ?

EDUC Q66 Educational background ?

FOSINVS Q21 Do you agree that the government should introduce forced-investment among the Muslims (such as increasing their EPF contributions) in order to increase their investment-participation in the market ?

GAPWIDEN Q19 Do you agree that the economic gap (wealth) within the Muslim community (intra-community) has widened during the last ten years or so ?

GROWUP Q3 Do you regard yourself as having urban or rural upbringing ?

IMPTINVS Q45 Of all the investments you hold, which of the following would you regard as most important to you ?

INVASNB Q57 Do you have any investment in the ASN/ASB ?

INVSCHR Q53 Which of the following describe you best as an investor ?

INVSKNWL Q46 How knowledgeable and well-informed are you in the investment that you have regarded as most important in Q45 ?

INVSPRCN Q47 On the average, what % of your total annual income do you invest in a year ?

INVSTOTL Q48 What is the total value of all your investments (excluding savings but including houses, land, etc.) as of date ?

INVSTYP Q44 Which of the following form of investments do you hold ? (You may tick more than one)

ISBKOPN Q41 What is your opinion of the Islamic Bank in Malaysia ?

ISBKSHRE Q55 Do you hold any shares of the Islamic bank ?

LIVING Q1 Do you live in an urban or rural area ?

MAGAZINE Q8 Can you name a few magazines that you read regularly ?

MARITAL Q64 Marital status ?

MSMINVS Q17 How satisfied are you with the government's efforts toward encouraging Muslims investment in the stock market ?

MSMKNWL Q23 Not many Muslims really understand or appreciate the functions and working mechanisms of the stock-market.

MTHINC Q69 What is your average monthly income ?

NDPOBJ Q11 Do you understand the basic objectives of the National Development Policy (NDP) that replaces the former New Economic Policy (NEP) ?

NEWSINTR Q7 Which of the following news in the media interest you most ?

NEWSLSTN Q6 Do you normally listen to the daily news on television or radio ?

NOSMINV Q50 Why don't you invest in the stock market ?

NPRLNG Q5 Which of the following daily newspapers do you read (language) ?

OCCPN1 Q67 Occupation ? (Please state)

OCCPN2 Which sector ?

RACE Q61 Race ?

RELIGION Q60 Religion ?

REVPLCS Q20 Do you agree that the government need to revise certain policies in order to narrow the differences in the wealth distribution among the Muslims ?

SAVINGS Q32 Do you keep any savings ?

SEX 62 Sex ?

SHREVAL Q56 What is the average market value of all your shares (including ASN/ASB shares) ?

SMENCRG Q24 The government has not done enough to encourage Muslims toward direct participation and investments in the stock-market.

SMIMPT Q22 The stock market is one of the most important means for a society to mobilise their resources and improve their economic well-being.

SMINVS Q49 Do you have any investment in the stock market ? (This includes shares of ASN/ASB)

SMISLAM Q30 If there exist an Islamic-based stock-market, a large number of Muslims would participate in its trading and holding of shares.

SMKNWL Q52 How knowledgeable and well-informed are you of the stock market investments ?

SMOPN Q31 What is your opinion of the existing stock market ?

SMRISKY Q28 It is better and less risky to invest in assets like houses, land or other business activities than the stock-market.

SMRLGN Q25 Religious reasons prevent a large number of Muslims from participating in the stock-market.

SMSPEC Q27 The stock-market is more a place for speculative short-term investments.

SMSTINVS Q26 Muslims who participated in the stock-market are more interested in the short-term capital-gain rather than long-term equity participation.

SPOSINC Q71 If Yes, what is your wife/husband average monthly income ?

SPOSWRK Q70 Is your wife/husband working ?

SVINST Q37 Which of the following institutions do you have your savings in ?

SVORINVS Q42 Which of the following statement/s do you agree with ?

SVPATTEN Q33 How would you regard your savings pattern to be ?

SVPRCN Q35 On the average, what % of your total income do you save each time ?

SVRETURN Q38 Do you regard rate of return on your savings as an important criteria in your choice of institutions that you save ?

SVTOTAL Q36 What is the total value of all your savings (excluding investments) as of date ?

VISION20 Q12 Do you understand the government visions of 2020 (especially its economic policies) ?

WELTDSBN Q14 Are you aware of the government's efforts/policies toward increasing and distributing the wealth of the nation to the Muslims?

WHYISBK Q40 If you do have an account with the Islamic bank, which of the followings made you choose the bank ?

WHYSAVE Q34 Why do you save ?

WRKLNG Q4 Which of the following language/s do you use most often in your daily work ?

WRKPLACE Q2 Is your work place in an urban or rural area ?

YINVASN Q58 Why do you invest in the ASN/ASB ?

YNOASN Q59 Why don't you invest in the ASN/ASB ?

YRSWRK Q68 Number of years working ?