CHAPTER 4
THE FUTURE FINANCIAL INTERMEDIATION NEEDS

4.1. INTRODUCTION

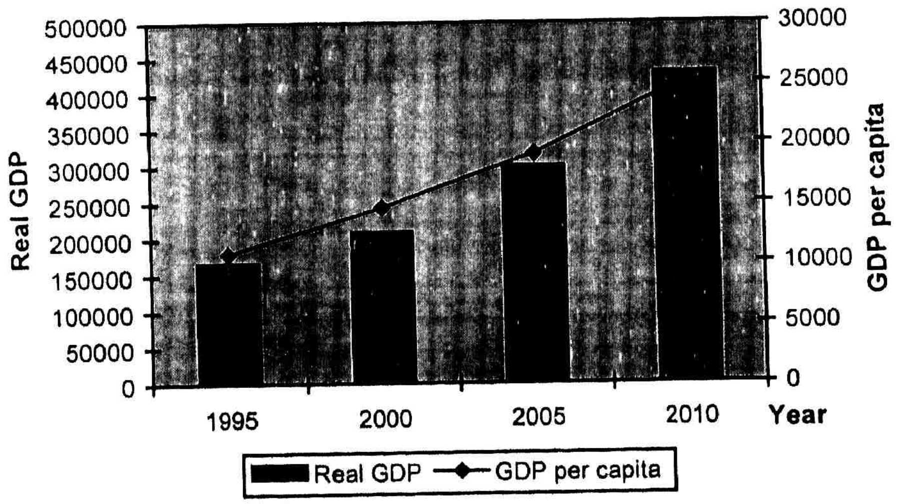
As economy becomes more globalized, the Malaysian financial system is subjected to challenges which not only within the country but also from global financial landscape. Hence, it is necessary to find out the gaps and potential impediments in the current financial system in order to enhance the ability to compete in this dynamic economic environment. This chapter will contain two main parts: First, the future directions of the Malaysian economy, and second, the discussion on future intermediation needs.

4.2. FUTURE DIRECTIONS OF THE MALAYSIA ECONOMY

4.2.1 The Economic Growth

The Malaysian economy is projected to grow at an average rate of 7.5% per annum for the next ten years. As shown in Figure 4.1, the real GDP is expected to increase steadily from RM209,269 million in 2000 to RM429,745 in 2010. The GDP per capita will also be increased at an average rate of 5.6% per annum from RM14,584 in 2000 to RM25,096 in 2010. The economic growth is targeted with low inflation and price stability.

Figure 4.1 : The Economic Growth, 1995 - 2010
(RM million in 1987 prices)



Source : 8th Malaysia Plan, OPP3.

4.2.2 Structure of Production

As shown in Table 4.1, the manufacturing and the services sectors will continue to be the main contributors to economic growth for the next ten years. Both sectors are expected to grow at an average rate of 8.4% per annum for the next ten years. In manufacturing sector, electrical and electronics products industry will remain the major contributor to the sectoral output. The contribution of services sector will be supported by three major sub-sectors, namely the finance, insurance, real estate and business services; the wholesale and retail trade, hotels and restaurants; and transport, storage and communication sub-sectors.

On the other hand, the agriculture sector and the mining sector are expected to reduce its share to GDP, which will contribute only 5.9% and 2.4% of

GDP respectively in 2010. The construction sector, however, is projected to grow moderately, with its contribution of about 3.2% to GDP, over this period. The growth will be attributed to the residential developments, particularly in the Multimedia Super Corridor (MSC), and the development of Putrajaya.

Table 4.1 : GDP by Industry of Origin, 2000 - 2010 (% of GDP)

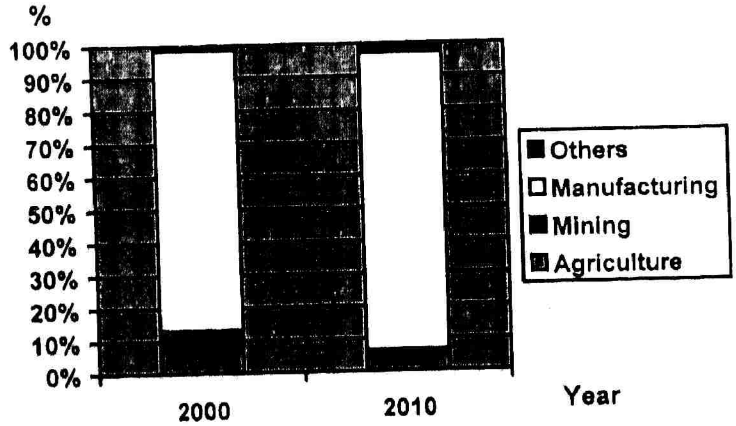
Industry	2000	2005	2010
Agriculture	8.7	7	5.9
Mining & Quarrying	6.6	5.5	2.4
Manufacturing	33.4	35.8	36.0
Construction	3.3	3.2	3.1
Services Sector	52.6	53.1	57.4
Electricity, Gas & Water	3.4	3.4	3.4
Transport, Storage & Communications	8.0	8.6	9.8
Wholesale & Retail Trade, Hotels & Restaurants	14.9	15.0	17.3
Finance, Insurance, Real Estate & Business Services	11.8	12.4	13.5
Government Services	7.0	5.7	4.7
Other Services	7.5	8.0	8.7
Net Import Duties less Imputed Bank Service Charges	-4.5	-4.5	-4.8
GDP	100	100	100
After adjusted for Import Duties less Imputed Bank Service Charges			
Primary Sector	38.1	34.1	33.7
Secondary Sector	16.8	19.1	25.3
Tertiary Sector	45.1	46.8	41

Source : Eighth Malaysia Plan, p35; OPP3, p71.

4.2.3 Merchandise Export

As shown in Figure 4.2, the manufactured exports are expected to continue be the largest contributor to the total merchandise export in 2010. On the other hand, the share of the agriculture and mining exports are expected to decline to 4.3% and 2.1% respectively in 2010. However, the exports of agro-based manufactured products are expected to increase due to the expansion in domestic processing of agricultural products. As a whole, the structure of merchandise exports indicates that Malaysian economy will continue to rely on the manufactured exports in its total exports over the next decade.

Figure 4.2 : Merchandise Exports, 2000 & 2010



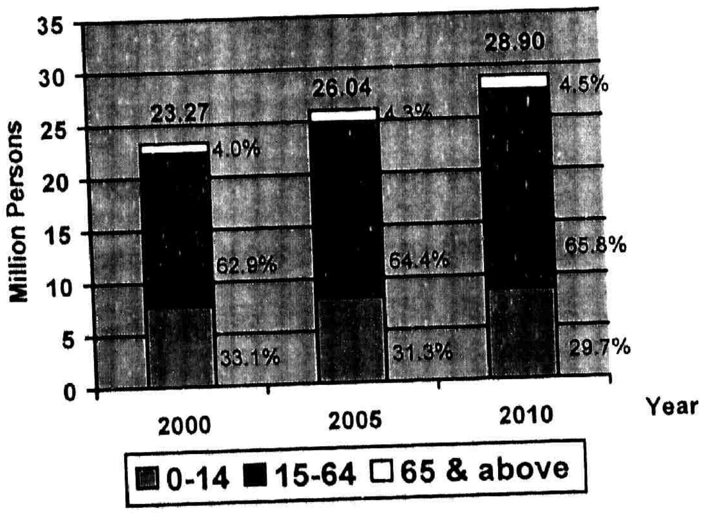
Source : OPP3, p 69.

4.2.4 Population Growth

The population of Malaysia is projected to increase gradually from 23.27 million in 2000 to 26.04 million in 2005 and 28.90 million in 2010. (See Figure 4.3) The increase in the size of household indicates that the demand for job creation and education facilities as well as other basic requirements such as the demand for housing and financial services will also be increased.

In terms of the demographic structure of the population, those in the working age group, i.e. 15-64 years, will increase from 62.9% in 2000 to 65.7% in 2010. It implies that the size of labor force will increase during the next ten years and more employment opportunities should be created. The proportion of the age group 65 years and above will also increase as a result from the improved quality of life. This may increase the intermediation needs and investment needs from this group of people in the near future.

Figure 4.3 : Population Structure, 2000-2010
(million persons)



Source : Eighth Malaysia Plan, p89; OPP3 p149.

4.2.5 Employment

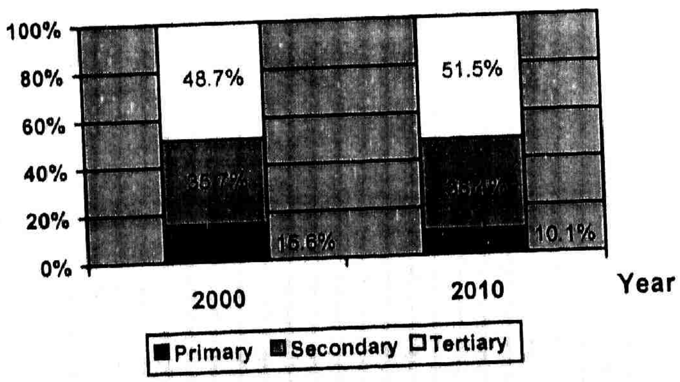
The labor force is expected to increase by 3.1% per annum to reach 12.9 million in 2010. With improved levels of education and more flexible work schedules, it is expected that more women will participate actively in the economy. The female labor force participation is expected to increase from 44.5% in 2000 to 49% in 2010.[11]

[11] Source : OPP3.

On the other hand, the demand for labor is projected to increase at an average rate of 3.1% per annum to 12.6 million in 2010. From the statistics on demand and supply of labor, it implies that the unemployment rate will be maintained at a low rate in the next decade, which is projected at about 2.5% by 2010, as compared with 3.1% in 2000.[12]

Figure 4.4 shows the employment structure by sector. The services sector, which will account for 51.5% of the total of employment in 2010, will continue to be the largest contributor to total employment for the next decade. While the manufacturing sector will also need more manpower with its expansion during this period, which will contribute about 30.4% to the total employment in 2010 as compared with 27.6% in 2000.

Figure 4.4 : Employment By Sector (2000 - 2010)



Source : OPP3, p153.

In terms of occupational composition, as shown in Table 4.2, the demand for professional and technical workers as well as administrative and managerial

[12] Source :OPP3.

workers will record a net increase of 770,900 persons and 304,200 persons respectively during 2001-2010 period. It reflects the future growth and development of economy will be driven by knowledge-based industries in all sectors, especially in the manufacturing and services sectors.

Table 4.2 : Occupational Structure, 2000 –2010 ('000 persons)

Occupational Group	2000	% of Total Employment	2010	% of Total Employment	Net Increase 2001-2010	
					'000	%
Professional & Technical Workers	1,019.9	11.0	1,790.8	14.2	770.9	23.1
Administrative & Managerial Workers	389.4	4.2	693.6	5.5	304.2	9.1

Source : OPP3, p154.

4.3. FUTURE FINANCIAL INTERMEDIATION NEEDS

4.3.1 Financial Resource Mobilization

As shown in Table 4.3, during 2001-2010 period, the aggregate domestic savings will be sufficient to meet investment needs, which is expected to record a surplus of 2.3% of GNP. However, it is projected that the overall resource surplus will become narrower towards 2010, which is expected to reduce from 10% in 2000 to only 1.2% in 2010. Public sector is anticipated to decrease its role in economic development while the private sector is expected to play an increasingly role in both savings and investment. This trend is reflected by the decrease in both public savings-GNP ratio and public investment-GNP ratio from 15.9% and 15% in 2000 to only 8.6% and 7.8% of GNP respectively in 2010.

Table 4.3 : Resource Balance, 2000 – 2010 (RM million in 1987 prices & % of GNP)

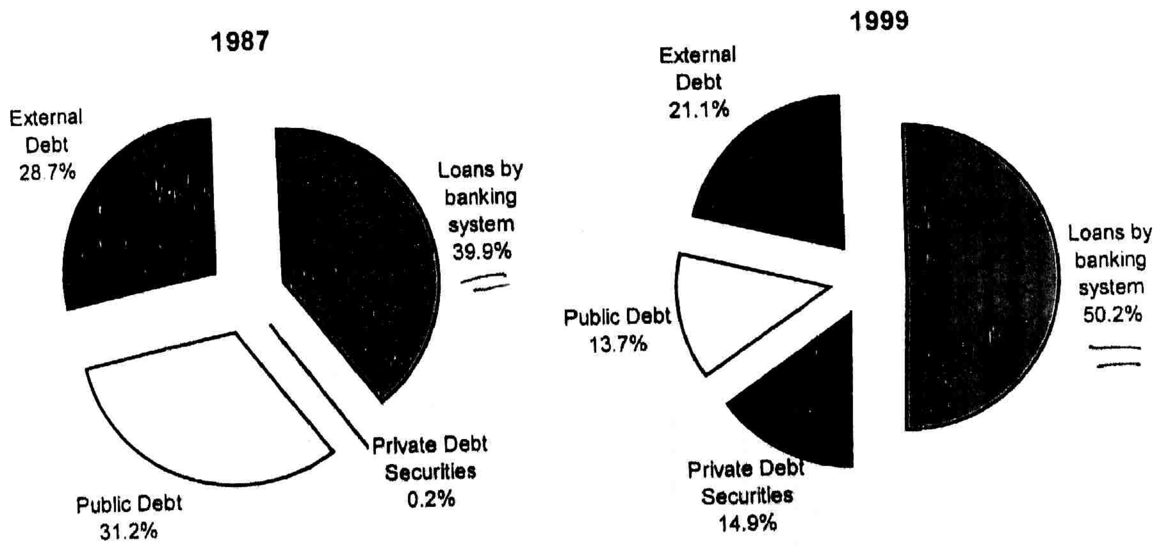
Sector	2000		2005		2010		2001-2010 (Cumulative) % of GNP
	RM million	% of GNP	RM million	% of GNP	RM million	% of GNP	
Public							
Savings	30,288	15.9	36,818	13.2	34,801	8.6	11.6
Investment	28,574	15.0	29,008	10.4	31,563	7.8	10.0
Resource Balance	**1,714**	**0.9**	**7,810**	**2.8**	**3,238**	**0.8**	**1.6**
Private							
Savings	44,004	23.1	62,479	22.4	94,285	23.3	22.3
Investment	26,669	14.0	63,595	22.8	92,667	22.9	21.6
Resource Balance	**17,335**	**9.1**	**-1,116**	**-0.4**	**1,618**	**0.4**	**0.7**
Total							
Savings	74,292	39.0	99,297	35.6	129,086	31.9	33.9
Investment	55,243	29.0	92,603	33.2	124,230	30.7	31.6
Resource Balance	**19,049**	**10.0**	**6,694**	**2.4**	**4,856**	**1.2**	**2.3**
GNP	190,492	100	278,924	100	404,658	100	100

Source : Eighth Malaysia Plan (p38), OPP3 (p78).

As overall, the total savings is expected to increase at an average rate of 5.68% per annum to reach RM129,086 million in 2010, which is about 1.7 times of the savings volume in 2000. With regard to investment, the total investment is projected to increase even more than total savings, which is at an average annual rate of 8.44% to reach RM124,230 million in 2010. The total investment spending by 2010 will be more than two times of its size in 2000. This indicates that the gap between total savings and total investment will be getting smaller over 2001-2010 period. In addition, it reflects the greater role of financial system in mobilizing fund.

So far, banking system was the main source of financing for the Malaysian economy, which was about 39.9% in 1987 and 50.2% in 1999. (See Figure 4.5) The increase in volume of fund to be mobilized will definitely increase the burden of banking system. The financial crisis in 1998 had highlighted the vulnerability of banking system and implied that it is a real danger of over-burdening the banking system in financing the economy. Hence, there is a need to develop a more diversified financial system.

Figure 4.5 : Financing of the Economy

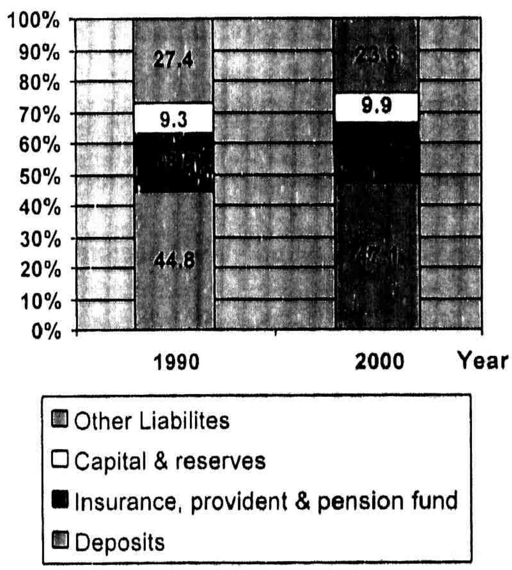


Source : BNM, annual report, 1999.

The capital market has the potential to increase in importance, particularly the private debt securities (PDS), as a source of funding in Malaysia. As shown in Figure 4.5, the share of PDS in financing the economy had increased from nearly zero in 1987 to 14.9% in 1999. The development of alternative sources of financing would diversify the financing risks and thus result in a more efficient financial system for mobilizing and allocating resources in the economy.

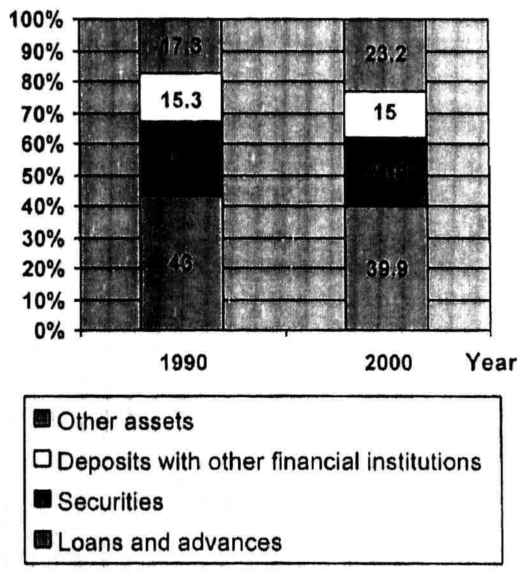
In terms of sources and uses of funds in the financial system, as shown in Figure 4.6 & Figure 4.7, deposits will remain the most important sources of funds, followed by insurance, provident & pension fund. Capital and reserves will also constitute about 10% of the source of funds. In view of the significance of deposits as the source of fund, banking institutions should increase the placement capability to serve these needs, such as providing wider range of products ~~with~~ attractive returns so as to maintain the high rate of deposits.

Figure 4.6 : Sources of Funds, 1990 & 2000



Sources : BNM Annual Report.

Figure 4.7 : Uses of Funds, 1990 & 2000



Sources : BNM Annual Report.

As for uses of funds, loans and advances extended by the financial institutions are expected to continue its role as the main channel for fund mobilization during 2001-2010 period. However, investment on securities in capital market, particularly on corporate securities, may play an increasingly role to complement the financial institutions in fund mobilization in the future. In view of the increasingly need for lower cost of long-term funds by domestic corporations, it will accelerate the development of domestic capital market.

4.3.2 The Challenges of Globalization

In 1994, Malaysia had committed under the General Agreement on Trade in Services (GATS) framework to gradually open the economy, including measures to increase foreign equity ownership limits in the financial institutions and stockbroking companies[13], measures relating to the entry of managers, specialists, experts and professionals, and the commercial presence of foreign capital market service providers.[14] Subsequently, Malaysia also committed under the ASEAN Framework Agreement on Services (AFAS) to give access among the ASEAN countries and the world at large. This indicates that there is an urgent need for domestic financial institutions and financial markets to increase their competitiveness and efficiency in order to maintain or increase their share in the financial sector.

At present, in the banking sector, there are 13 commercial banks that are wholly foreign-owned, accounting for about 30% of total assets of commercial

[13] As at end-Jan 2000, the limit on foreign ownership of stockbroking companies in Malaysia is 49%.

banks. Besides that, in insurance industry, the foreign market share is about 74% of life insurance premiums and 35% of general insurance premiums.[15]

One of the key implications of globalization is that of greater international competition. Increasing globalization will allow issuers to raise their fund easily in the global market, and permit consumers to seek higher return investment in the international financial market. This will increase the market competition as to attract savings and fund-raising activities.

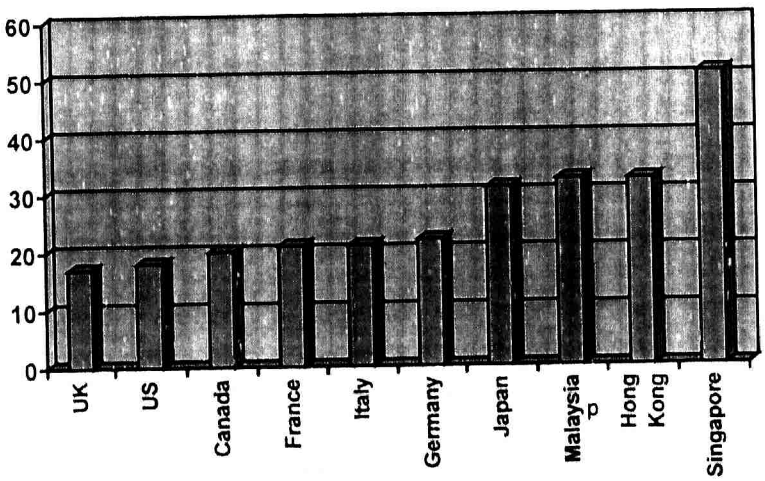
As shown in Figure 4.8, Malaysia's average savings rate for the period of 1990 to 1999 was about 32.4% of GDP, which was quite high as compared with other countries such as UK, US, Canada, France, Italy and Germany. Therefore, the Malaysian financial system is expected to face greater competition in mobilizing domestic savings when the financial market is opened up gradually. If the domestic financial institutions and financial markets are not competitive enough as compared with foreign players, a portion of domestic savings may be channeled abroad.

In regard to fund-raising, at present, some Malaysian companies have looked to overseas equity markets for funding. Table 4.4 shows the companies listed on the KLSE which have listings on foreign stock exchanges. In view of the future challenges of market globalization, there is an urgent need for Malaysian financial

[14] Source : Securities Commission, BNM.
[15] Source : BNM.

system to become internationally competitive by increasing its efficiency, effectiveness and stability.

Figure 4.8 : National Savings Rate As A Percentage Of GDP (1990-99 average)



Source : SC; Wharton Econometrics Forecasting Associates Group; BNM; Monetary Authority of Singapore; United Nations Economic and Social Commission for Asia and the Pacific; Census and Statistics Department, Hong Kong Special Administrative Region.
* p - preliminary

Table 4.4 : Malaysian companies listed on the KLSE with equity listings on foreign stock exchanges

Stock exchange	Name of company
LSE	• Highlands and Lowlands Bhd • Inch Kenneth Kajang Rubber PLC • Kuala Lumpur Kepong Bhd • Kinta Kellas PLC • Petaling Tin Bhd • Riverview Rubber Estates Bhd • Tanjong PLC
SGX	• Inch Kenneth Kajang Rubber PLC • Kinta Kellas PLC
Copenhagen Stock Exchange	• United Plantations Berhad
Tokyo Stock Exchange	• YTL Corporation Berhad

Source : KLSE, SC (2001).

4.3.3 The Regulatory and Supervisory Framework

According to Crockett (1997), the greater efficiency and stability in the country's financial sector can be achieved through regulation. In addition, regulatory framework should be an ongoing process and should be adjusted to fit the changing environment.

At present, the Malaysian financial system is mainly governed by BNM and SC. There are also other regulatory authorities such as ROC, FIC and MITI to complement the functions of SC. In addition to these authorities, market institutions such as KLSE also undertake certain regulatory function with regard to the particular market segments in which they operate. Therefore, it is necessary to ensure that there is no gap or overlapping of regulations among these regulatory authorities, such as the case of the issuance of IPO, which is shown in Table 4.5. Besides that, Table 4.6 shows some examples of overlaps in securities laws and rule implementation, which require certain rectification.

Table 4.5 : Overlaps in regulatory framework pertaining to the issuance of equity shares

Regulatory provisions	Authority responsible
SCA 1 Policies and Guidelines on Issue/ Offer of Securities	SC
KLSE Listing Requirements	KLSE
MESDAQ Listing Rules	MESDAQ
Exchange Control Act 1953 Exchange Control Notices BAFIA (for issuance by licensed financial institutions)	BNM
FIC Guidelines	FIC
Industrial Co-ordination Act 1975	MITI

Source : Securities Commission

Table 4.6 : Certain examples of overlaps in securities laws and rules implementation as at end-June 2000		
Regulatory provisions	**Overlapping regulatory functions**	
Insider trading involving company officers	Governed by the CA (Section 132A), which is enforced by the ROC	Also governed by the SIA (Section 89E), which is enforced by the SC.
Related party transactions	Governed by the CA (Section 132G), which is enforced by the ROC.	Also governed by sections 111-120 of the Main Board Listing Requirements, which prescribe stringent requirements with regard to related party transactions. Administered by KLSE.
Reporting of substantial shareholding	The CA (Division 3A) has provisions relating to reporting requirements by substantial shareholders, which are enforced by the ROC.	The Securities Industry (Reporting of Substantial Shareholding) Regulations 1998 has similar provisions and enforced by the SC.
Source : Securities Commission		

Besides that, in order to face greater challenges towards globalization, the regulations with regard to foreign institutions should be gradually liberalized. According to the study of Levine (2000), foreign entry will help to create the conditions for improved financial intermediation and long-term growth. It is clear that the protective measures can not sustain long as it would erode competitiveness of domestic institutions in the long term. However, the liberalization process should be in stages to provide lead-time for domestic financial institutions to adjust themselves to the new environment.

In addition, consumer and investor protection should be enhanced with more prudential regulations in order to promote their confidence on the investment in financial institutions and financial markets. For example, increased transparency via appropriate disclosure standards is needed in the process of financial intermediation as this would strengthen managerial incentives by making bank managers more personally accountable when losses occur.[16] In addition, regulatory control should be enforced on those problem listed companies in KLSE, which intend to procrastinate the restructuring process, as this will deter the investment from both domestic and abroad and thus slowdown the pace of recovery from the crisis.

4 Structural and Institutional Development

As discussed in section 4.3.1, in the next ten years, the domestic funds to be mobilized will be increased. Furthermore, as an impact of market globalization, the pool of investable funds will also expand significantly. This development implies that the financial intermediaries should maintain a higher capacity in order to meet the future intermediation needs.

The current trend in Malaysia as well as in global markets is the rapid consolidation of financial institutions. As at 31 December 2000, 50 of the 54 banking institutions have been consolidated into 10 banking groups. Effectively, 94% of the total assets of the domestic banking sector have been rationalized and consolidated.[17] It is expected that in the next ten years, the financial system will consist of smaller number but bigger size of financial institutions.

Source : Crockett, 1997.
Source : BNM web site.

In regard to capital market, as shown in Table 4.7, the Malaysian stock market was just ranked as the 23rd largest market in the world in 1999, compared to 11th largest market in the world in 1996.

Table 4.7 : Market Capitalisation of Major Bourses Within Respective Countries

Rank	Country	End-1999 (US$ billion)	Country	End-1996 (US$ billion)
1	United States	16,642	United States	10,215
2	Japan	4,555	Japan	3,106
3	Great Britain	2,855	Great Britain	1,643
4	France	1,503	Canada	890
5	Germany	1,432	Germany	665
6	Canada	801	France	587
7	Italy	728	Hong Kong	449
8	Netherlands	695	Switzerland	400
9	Switzerland	693	Netherlands	375
10	Hong Kong	609	Australia	312
11	Spain	432	**Malaysia**	**306**
12	Australia	428	Taiwan	274
13	Taiwan	377	Italy	257
14	Sweden	373	Spain	241
15	Finland	349	Sweden	240
16	Korea	306	South Africa	240
17	Brazil	228	Brazil	217
18	Singapore	198	Singapore	153
19	Greece	197	Korea	139
20	South Africa	193	Belgium	119
21	Belgium	184	Mexico	107
22	Mexico	154	Thailand	96
23	**Malaysia**	**140**	Indonesia	91
24	Turkey	113	Philippines	80
25	Denmark	105	Denmark	71
26	Ireland	69	Chile	66
27	Chile	68	Finland	63
28	Portugal	68	Norway	57
29	Indonesia	64	Argentina	45
30	Norway	64	New Zealand	37

Source : Federation Internationale des Bourses de Valeurs; Securities Commission.

In the international financial markets, there was a rapid consolidation began from consolidation between clearing houses and exchanges to mergers among and across derivative and stock exchanges. (See Table 4.8) In addition, there has been an increased trend in mergers and strategic alliances among market institutions of different national jurisdictions. (See Table 4.9) Hence, further consolidation exercises for the Malaysian financial and market institutions are needed to increase their capacity and to compete effectively in the global market.

Table 4.8 : Consolidation and Integration of Market Institutions in Malaysia and Selected International Markets

Form	Exchange/ Clearing house
Vertical integration of trading and settlement functions	• London International Financial Futures and Options Exchange (LIFFE) and London Clearing House
Consolidation of stock and derivative exchanges	• Brussels Stock Exchange, Belgian Futures and Options Exchange (BELFOX) and National Depository • National Association of Securities Dealers Automated Quotation (Nasdaq), American and Philadelphia Stock Exchanges • Stockholm Stock Exchange and Swedish Derivatives Exchange • Lisbon Stock Exchange and Oporto Derivatives Exchange • Stock Exchange of Hong Kong (SEHK) and Hong Kong Futures Exchange (HKFE) • Stock Exchange of Singapore (SES) and Singapore International Monetary Exchange (SIMEX) • KLSE and KLOFFE • KLSE and COMMEX
Consolidation of financial and commodity derivative exchanges	• KLCE and MME

Sources : Arthur Andersen; OM Group; Securities Commission.

Table 4.9 : Cross-border Mergers and Alliances in International Markets

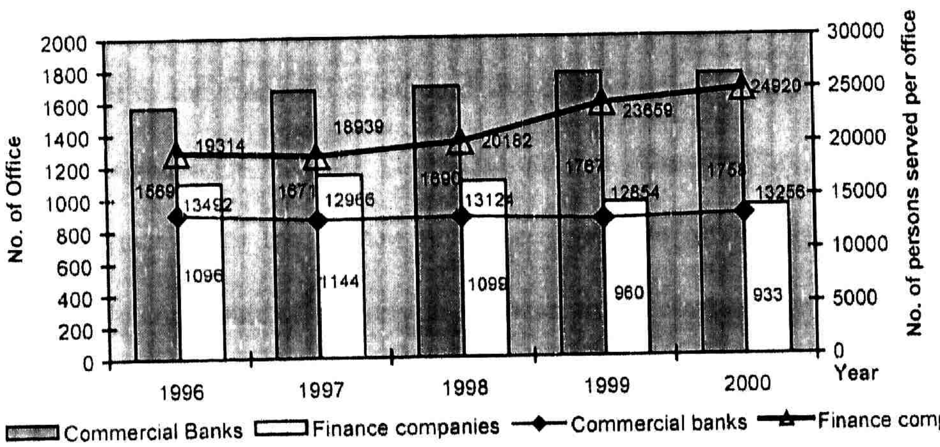
Form	Exchange
Alliances among exchanges	• Brussels, Paris, Frankfurt, Amsterdam and Milan Stock Exchanges. • New York, Amsterdam, Paris, Brussels, Tokyo, Hong Kong, Australia, Mexico and Brazil. • Brussels, Luxembourg and Amsterdam Exchanges – Benelux alliance. • ParisBourse SBF SA and Lisbon Stock Exchange. • LIFFE and Chicago Mercantile Exchange (CME) • Eurex and Chicago Board of Trade (CBOT) • ParisBourse SBF SA, CME, SIMEX, Montreal Exchange and Bolsa de Mercudorias and Futuros (BM&F) • Spanish and French Derivative Markets • Australian Stock Exchange Ltd (ASX) and Nasdaq • SEHK and Nasdaq • Paris, Brussels and Amsterdam • Softbank Corporation and Nasdaq
Merging of trading platforms	• Deutsche Börse and Soffex • Stockholm, Oslo and Copenhagen Stock Exchanges
Agreements for co-operation and partnerships	• Nasdaq-AMEX and SEHK • New York Stock Exchange (NYSE) and Tokyo Stock Exchange (TSE)

Sources : Arthur Andersen; Reuters; Eurex; Securities Commission.

Besides consolidation exercise, due to the increase in total amount of financial resources, the regulators should ensure that the future branch network of financial intermediaries is sufficient to support the increasing needs of fund mobilization. As shown in Figure 4.9, the number of people served by a bank branch office and a finance company's branch increased to 13,256 persons and

24,920 persons respectively as at end of 2000. Besides the reason of increased population, this is also due to the downsizing of office network. Together with the increase in financial resources, this indicates that the burden of each branch office will definitely be heavier in the near future. Therefore, this necessitates certain rationalization exercises for domestic financial institutions and stockbroking companies to achieve higher level of efficiency to meet the intermediation needs.

Figure 4.9 : Banking System : No. of office network and persons served per office (1996 - 2000)



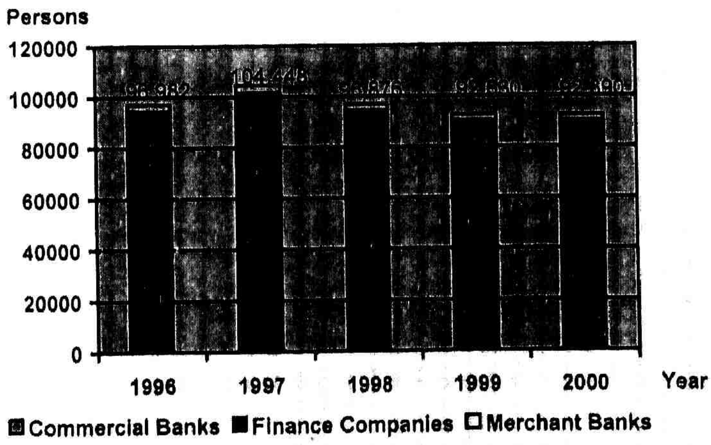
Source : Bank Negara Malaysia.
Note : The data excludes Islamic banks.

Besides that, in order to meet specific needs of consumers and investors and to diversify the financial risks, the development of a more diversified financial system should be promoted. In view of the aim to reduce the burden of banking institutions as the main source of financing, it is necessary to have more types of financial and market institutions in the near future. For example, globalization will create needs for the services that currently not covered by the existing financial institutions, such as helping corporations and investors to raise fund and buying securities respectively in the international markets. As it may be costly for banking institutions to provide such services, a more specialized financial institution with expertise in this area is needed.

.3.5 Human Resources Development

Human capital is playing an increasingly role in the development of financial intermediation, particularly who are able to adapt and adjust to the changing skills demands and with higher education qualification. As shown in Figure 4.10, the number of employees in banking system has reduced since 1997, mainly due to the financial crisis and the consolidation process. In view of the imminent challenges such as globalization and liberalization, the Government needs to ensure that the human resources available in the financial sector are sufficient to contribute effectively in an increasingly competitive environment.

Figure 4.10 : The Number of Employees in the Banking System (1996-2000)



Source : BNM.
The data excludes Islamic banks.

Besides that, the effects of globalization and liberalization will redefine the traditional job requirements. The skill requirement of employees would change as a result of the dynamic business environment. Hence, from time to time, the labor force needs to be retrained in order to enhance their productivity and maintain the competitiveness of the domestic institutions. The human resources department of each institution should conduct a job analysis of the employees periodically in order to fill the gap in skills required. In addition, an efficient appraisal system is critical to assess the employees' performance so as to identify the weaknesses and strengths of employees, and then proceed with proper training programs or rewards accordingly.

With the technology advancement, skilled manpower will be highly needed, for instance, ICT workers. It is projected that the demand of ICT personnel in Malaysia will be increased from 108,000 persons in 2000 to 306,600 persons in 2010.[18] At present, the supply of these personnel is still not enough to meet the industries' needs. For example, in 1999, only 20,260 students graduated from public and private institutions in ICT and related engineering courses.

Besides ICT workers, the financial sector will also need a large pool of knowledge workers in different areas, such as R & D, products and services, banking operation, risk management and investment. In order to fill this gap in the near future, the normal in-house training programs might not enough to enhance the ability of financial providers in these areas. With this regard, certain benchmarking programs on best practices with alignment to international standard and co-operation with related international organizations are needed as well to effectively improve the skills of the existing workforce in financial sector.

In addition, the culture of excellence, strong ethical and moral value is crucial in financial marketplace. If any financial participant behaves unethically in the process of financial intermediation, it will result in the misuse of collective resources and even loss of reputation of the whole financial system. In this regard, the regulatory framework should be streamlined to intensify the punishment of unethical business practices in financial sector. In addition, the government should enforce the requirement of an organization's ethics control system in each financial institution and ensure that those controls are in place and are taken seriously.

Education is also playing a pivotal role in the human resources development. In the fast-paced economic development, labor force with higher education level, especially at tertiary level, is highly needed. In 2000, the percentage of the population completing tertiary education was only 14% and secondary education was 58.8%.[19] Since it is projected that at least 35% of the labor force will have attained tertiary education by the end of 2010, there should be some efforts to encourage higher education during 2001-2010 period.

[18] Source : OPP3.
[19] Source : OPP3.

Technological Advancement

According to a survey on IT usage in banking system, which conducted by BNM in July 1995, the main areas of computerization at commercial banks were in four key functional areas with fully operational system, i.e. deposits handling, financial management, loan product and electronic delivery channels including ATMs.[20] However, in order to meet future challenges, computerization and modernization in banking operation should be further broaden to other areas such as risk management, trade financing, loan processing and loan evaluation as well as collateral system.

Table 4.10 : ICT Expenditure By Sector, 1995 – 2000
(RM million)

Sector	1995	%	2000	%	1996-2000	%	Average Annual Growth Rate (%), 1996-2000
Banking & Finance	1,026	27.2	827	14.0	3,723	15.0	-4.2
Manufacturing	494	13.1	1,182	20.0	4,041	16.3	19.0
Government	380	10.1	532	9.0	2,062	8.3	6.9
Telecommunications	-	-	473	8.0	2,323	9.3	-
Distribution	304	8.1	650	11.0	2,586	10.4	16.4
Oil & Gas	380	10.1	296	5.0	1,623	6.5	-4.8
Utilities	266	7.0	236	4.0	1,253	5.0	-2.3
Professional ICT & Other Services	125	3.3	236	4.0	236	1.0	13.5
Healthcare	-	-	59	1.0	59	0.2	-
Education & Research	114	3.0	236	4.0	1,008	4.0	15.6
Transportation	114	3.0	177	3.0	1,147	4.6	9.1
Home	76	2.0	473	8.0	2,004	8.0	44.1
Plantation & Mining	76	2.0	-	-	100	0.4	-
Others	418	11.1	532	9.0	2,736	11.0	4.9
Total	**3,773**	**100.0**	**5,909**	**100.0**	**24,901**	**100.0**	**9.2**

Source : Computer Industry Association of Malaysia (PIKOM), Eighth Malaysia Plan (p 365).

Source : BNM.

During seventh Malaysia Plan, due to the hit resulted from financial crisis, total IT expenditure in banking and finance sector experienced a negative average annual growth rate of 4.2%. (See Table 4.10) A number of modernization projects in some commercial banks had also been terminated or postponed because of the merging process. In spite of these interruptions, a need to increase the allocation of IT fund to reengineer the operations in financial sector should be noted, especially for the acquisition of new system, system upgrading and infrastructure building. The establishment of reengineering team is needed to revise the operations and perform research periodically for quality improvement.

Besides the efforts to increase the efficiency of internal banking operations, greater customer involvement in financial services should be promoted in banking industries. With the average higher educational level and IT advancement, in fact more routine transactions can be performed by the customer via ATM machines, such as cash deposit, fast cheque deposit, passbook update and FD placement. At present, there are many foreign-owned banks providing such services, such as Standard Chartered and Citibank. Though, for local banks, it is yet to see more ATM machines to perform greater variety of routine transactions.

Besides that, information will play an increasingly important role in improving efficiency of the intermediation process. Those managed to handle information efficiently will gain greater competitive advantage even in the global market. Nevertheless, there is also a higher concern on data security issue in view of expanding volume of information, including customer database, handled electronically. The system used in the intermediation process should be highly secured in order to gain confidence from customers, especially when the financial system expands globally.

4.3.7 Product Innovation

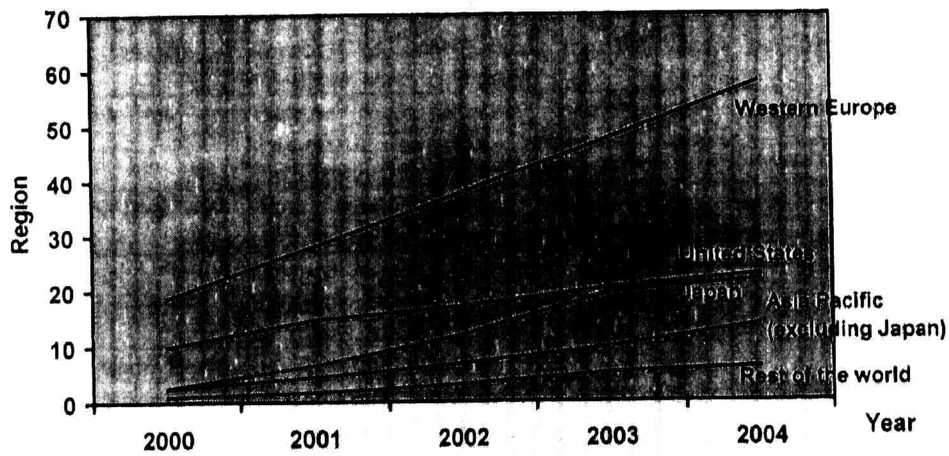
William S. Sachs and Frank Elston (1994) noted that " no financial service can remain unchanged indefinitely". In order to be more competitive, the financial intermediaries should continue to introduce various packages of product or modify the existing product's features. The product innovation should aim to increase the value-added of financial products, to provide efficient returns and to cut the transaction cost. In addition, financial institutions can also have collaboration with corporate to develop more attractive products, such as Hong Leong Bank's credit card with 'Touch & Go' toll payment facility and Public Bank's products with Bonus Link points.

IT advancement also play a significant role in product innovation. As shown in the Table 4.11, the number of internet users has grown rapidly from 30,000 in 1995 to 4,000,000 in 2000. In addition, the number of personal computers (PC) per 1,000 population had also increased from only 29.5 in 1995 to 95.7 in 2000. Following the Government's effort to encourage greater utilization of information and communications technology (ICT) such as 'Buying PC via EPF' scheme and the PC Ownership Campaign, it is no doubt a good opportunity for financial institutions and financial market to promote e-banking and electronic-trading[21] respectively.

Table 4.11 : Selected ICT Indicators, 1995 and 2000		
Indicator	**1995**	**2000**
Personal Computers Per 1,000 Population	29.5	95.7
Number of Internet Users	30,000	4,000,000
Sources : 8th Malaysia Plan (2001), p 367		

Furthermore, according to the Global online banking user forecast, Asia Pacific region is expected to have rapid growth in the number of online banking user from about 2.4 millions in 2000 to 13.8 in 2004, as shown in Figure 4.11. This is indeed an opportunity for banking industry to develop the online banking services.

Figure 4.11 : Global Online Banking User Forecast



Source : IDC, cited by Malaysian Business, Sept 16, 2001.

[21] The electronic trading system is the system that enables investors to view the stock market and retrieve market information electronically. In addition, investors can also make buy or sell order via this system.

However, currently there are only six out of the 10 domestic banks are offering transactional Internet banking to the public. Table 4.12 shows the online services that offered by the ten domestic banking groups. It is expected that when the foreign banks are given permission to provide their Internet banking services to Malaysians in 2002, there will be a heavy competition in Internet banking between local banks & foreign banks. Therefore, there is an urgent need for local banks to develop their Internet banking, such as widen the range of online services in order to compete in more liberalized banking environment as well as to gain more market share.

Table 4.12 : The Online Services Offered by Local Banks

Banks	Services
Maybank	Consumer: Online banking, bill payment, stocks, insurance, shopping, education, investments. Business: Online banking, enterprise banking, international banking, Islamic banking, insurance.
Bumiputra-Commerce Bank Bhd	Income tax payment services.
Hong Leong Bank Bhd	Accounts summary, funds transfer, credit card services, bill payments, services request.
Southern Bank Bhd	Transfer funds, accounts summary, bill payments, monthly statements, personal preference setting, total financial management, financial report printing.
Alliance Bank Bhd	Open new accounts, bill payments, retrieve up-to-date information on interest rates, KLSE stock quotes.
Public Bank Bhd	Balance inquiry, transaction history, statement request, funds transfer, account registration, credit card payment, loan payments, bill maintenance, cheque book request.
Arab Malaysian Bank Bhd	Informational website
RHB Bank Bhd	Informational website
Affin Bank Bhd	Informational website
EON Bank Bhd	Informational website

Source : Malaysian Business, Sept. 16, 2001.

Besides that, in order to maintain the efficiency of electronic-banking for banking industries and electronic-trading for financial market, clear and user-friendly guideline should be given to the operators and consumers. Furthermore, the time taken for transacting business should not be long. Therefore, some efforts are needed to upgrade communications network as well as ICT infrastructure, such as using the Wavelength Division Multiplexing (WDM), which enable the transmission of high speed, broadband multimedia applications over long distances[22], and appropriate Digital Subscriber Line technology. In addition, the charges for those broadband accesses should be affordable in order to encourage more usage.

In addition, financial institutions should increase Research and Development (R & D) efforts in product design in line with the changing needs of the customers, such as introducing more creative products in trade-financing, remittances and foreign exchange derivatives. At present, many foreign banks and insurers specialize in offering high-value added services or products such as project financing and risk management, which domestic institutions are still lacking. In addition, foreign banks also earn good profits from helping local companies to raise funds from international securities markets and cross-border trading in financial assets.[23] With sufficient R & D fund, domestic institutions are able to conduct adequate research in order to increase their competitiveness in the market.

[22] Source : 8th Malaysia Plan, 2001, p 381.
[23] Source : Sieh-Lee, 2000

4.4 Summary of the Future Intermediation Needs

Key Areas	Future Intermediation Needs
Financial Resource Mobilization	• Increase capacity of financial intermediaries.
Globalization	• Increase competitiveness to meet complex intermediation needs and fund-raising needs.
Regulatory and Supervisory Framework	• Ensure that there is no gap or overlapping of regulations among different regulatory authorities. • Further deregulation to allow greater competition among domestic financial institutions and foreign players. • Enhance consumer and investor protection with more prudential regulations.
Structural and Institutional Development	• Further consolidation of domestic institutions. • Ensure that the branch network of financial intermediaries is sufficient to support the increasing needs of fund mobilization. • Promote the development of a more diversified financial system.
Human Resources Development	• Ensure that the human resources available in the financial sector are sufficient. • Training programs to enhance the productivity of labor force. • Skilled manpower is highly needed. • The benchmarking program on best practices and the co-operation with related international organizations. • Intensify the punishment of unethical business practices and enforce an organization's ethics control system. • Increase academic qualification of labor force.
Technological Advancement	• Further broadening of computerization and modernization in banking operation. • Increase allocation of IT fund. • Promote greater customer involvement in financial services. • Improve data security.
Product Innovation	• Provide wider range of products and services. • Promote electronic-banking and electronic trading system. • Enhance product facilities and communication infrastructure. • Intensify R & D efforts in product design.