BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Letter of Transmittal

Yang Amat Berhormat Dato' Sri Mohd Najib bin Hj. Tun Abdul Razak,
Deputy Prime Minister/Minister of Finance,
Malaysia.

YAB Dato' Sri,

In accordance with section 56 of the Takaful Act 1984 and section 192 of the Insurance Act 1996, I have the honour to submit for presentation to Parliament, reports on the administration of the Takaful Act 1984 and Insurance Act 1996, and other related matters for the year ended 31 December 2008 which are incorporated into this Financial Stability and Payment Systems Report 2008.

Respectfully submitted,

Zeti Akhtar Aziz
Governor

25 March 2009

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Governor's Statement

The Malaysian financial system faced an exceptionally challenging external environment in 2008. The conditions in the global financial system deteriorated sharply during the second half of the year as the unprecedented funding and asset liquidity strains and the larger-than-expected impairment losses associated with sub-prime-related portfolios weakened the balance sheets of many global financial institutions. The extent of these losses has now seen authorities from several major economies significantly scale up intervention measures in attempts to restore stability to their financial systems. The extensive reach of this crisis has underscored the need for more comprehensive policy responses to avoid its systemic implications on financial systems in other parts of the world. Equally vital is to restore the intermediation function and thus the flow of credit to support the economic recovery.

Despite the prolonged global liquidity squeeze and the continued weak global credit market, the overall confidence in the Malaysian financial sector has remained intact. Malaysia has benefited from the years of financial reforms and capacity building in the financial sector that has yielded a high level of resilience. In addition, negligible exposure to the sub-prime-related risks and the ample liquidity conditions also contributed to mitigate the risks of systemic contagion, thus allowing for the continued functioning of the domestic financial markets, payment systems and the overall financial intermediation of the financial system.

Institutional resilience has also been supported by the continued improvement in asset quality and the adoption of rigorous provisioning practices by banking institutions. This has maintained the total loan loss provisioning level of the banking system at its highest level since the Asian financial crisis. Similarly, the healthy profits recorded over several years allowed for the accumulation of capital buffers by banking institutions and insurance companies. Enhanced risk management infrastructures that had been instituted have also contributed towards reducing the degree of risk aversion by banking institutions. The implementation of the risk-based differential premium for deposit insurance by the Malaysia Deposit Insurance Corporation (PIDM) in 2008 has further strengthened incentives for sound risk management by banking institutions. The establishment of PIDM itself has also strengthened the framework that is in place for pre-emptive and effective resolution to be undertaken in the event of problem institutions.

The impact of the current global economic downturn on the domestic economy can be expected to exert some pressure on the asset quality of banking institutions. Banking institutions have, however, responded pre-emptively to these emerging risks. Several banking institutions have initiated steps to shore up their capital positions through rights issues and issuance of hybrid Tier-1 capital instruments in 2008, in anticipation of a further deterioration in the global credit market and deeper consequential impact on the Malaysian economy. The resulting much stronger capital positions have placed the banking institutions on a stronger footing to absorb the impact of the economic slowdown and to be positioned to seize the opportunities that present themselves when the economy recovers.

In this period of heightened uncertainty, increased vigilance will be critical. The Bank's surveillance of the financial system has been maintained in a heightened state of alert to any emerging sources of risk, with increased scrutiny of all areas of significant exposures in the financial sector. Multiple scenario-based stress tests conducted at both micro and macro levels have continued to show that the system is adequately positioned to absorb shocks with the risk-weighted capital ratio well above the minimum regulatory level even under adverse conditions. The Bank has also maintained close communications with the board of directors and senior management to ensure that risk assessments are sufficiently robust and forward-looking in light of the high level of uncertainty that remains. This process is critically supported by robust information and surveillance systems that have been put in place that cover the broad segments of the financial markets to facilitate the timely detection of emerging risks within the financial system.

Malaysia has also put in place effective institutional infrastructures over the recent decade which have been able to deal pre-emptively with emerging risks in both the retail and business segments. Special funds have been set up to ensure that there is continued access to financing for the small and medium enterprise (SME) sector, particularly for the purpose of modernising their business infrastructures and upgrading their production capacity. A Small Debt Resolution Scheme which was set up in 2003 provides relief to small businesses facing temporary cash flow problems by facilitating more effective restructuring and rescheduling of credit facilities with the banking institutions. In addition, the Credit Counselling and Debt Management Agency (AKPK) which was established in 2006 has increased its branch network throughout the country to provide credit management counselling services to households and thus avail the retail borrowers the opportunity to restructure their credit facilities.

The global financial turmoil has affected investor sentiment and pricing in the raising of funds via the domestic bond market. Recognising the importance of re-energising the domestic bond market to enable corporations to better manage their funding needs at more cost-efficient prices, the Government and Bank Negara Malaysia is in the process of establishing a Financial Guarantee Institution (FGI) to provide credit enhancement for bond issuances by viable corporations. The Bank is also introducing an enhanced corporate debt workout mechanism, which will provide a platform for corporations to effectively restructure their borrowings with multiple lenders as well as debt securities issued by them. These measures are reflective of the Bank's commitment to address the potential stresses at an early stage of the problem.

The overall financial stability during the year has allowed the Bank to pursue its longer-term developmental strategies, which serve to strengthen the foundation for further growth and transformation of the domestic financial system. During the year, the Islamic finance sector continued to record strong performance, with the Islamic banking sector achieving an average annual growth of 20% over an eight-year period. The setting up of new Islamic banking subsidiaries by domestic banking institutions, the world's largest retakaful company, and the granting of new licences for the conduct of international currency business under the Malaysia International Islamic Financial Centre (MIFC) flagship in 2008 would further strengthen Malaysia as an international hub for Islamic finance. Product innovation based on the musharakah concept is being more widely pursued, including in the retail segment, in response to increased demands for competitive financial solutions that comply with Shariah requirements. The solid growth of the Islamic finance industry will continue to be supported by strong supervisory oversight to ensure an orderly growth of the industry into the mainstream of international finance.

A more robust legal framework is also being put in place with the proposed Central Bank of Malaysia Act, which will provide greater clarity on the financial stability mandate for the Bank. The proposed Act will strengthen the Bank's capacity to discharge its mandate for financial stability taking into account developments in the financial system which has now become highly interconnected with more complex financial innovations, more internationalised capital markets and with greater convergence of financial intermediaries and products. The strengthened legislative framework is positioned to allow the Bank to address the challenges of the modern financial system.

As the Bank prepares for greater liberalisation of the financial sector, the experience of the current global financial turmoil offer further insights on risk and governance practices that would be useful for Malaysia in setting the new thresholds and expectations on cross-border banking activities and the nature of foreign participation in the domestic financial landscape. Of importance is to ensure that liberalisation will be mutually beneficial and will contribute positively to Malaysia's economic agenda while also preserving financial stability. The underlying philosophy remains that the degree of liberalisation should be commensurate with the capacity of the financial sector to cope with the consequent changing landscape.

While the current challenges facing the financial sector are significant, the strong focus on sound governance and risk management which underpins the regulatory and supervisory regime in Malaysia has been instrumental in ensuring that developments in the financial sector do not outstrip its capacity to manage the associated risks. Central to this regime has been the emphasis on ensuring that the preconditions are met before deregulation and liberalisation measures are pursued, while maintaining an appropriate balance between rule-based and principle-based approaches. This approach will continue to frame the Bank's regulatory direction going forward. Lessons will be drawn from the current global financial crisis to further strengthen the main lines of defence against institutional and systemic risks in the financial sector. This will include further enhancements to the Bank's surveillance systems, the strengthening of the institutional arrangements for dealing with threats to the financial system, improvements to the incentive structure, the promotion of sound corporate governance and risk management practices, and the development of the necessary conditions for increased market discipline.

Zeti Akhtar Aziz
Governor

25 March 2009

Executive Summary

Executive Summary

The Financial Stability and Payment Systems Report has been prepared against the backdrop of unprecedented stress faced by the international financial system and deterioration in the global economies. This Report aims to provide an assessment of the risks and challenges faced by the Malaysian financial system and the regulatory and supervisory initiatives undertaken by Bank Negara Malaysia towards preserving market confidence, ensuring continued intermediation of funds and maintaining overall financial stability. The Report also covers developmental initiatives that were pursued towards reinforcing the role of the financial services sector in supporting economic activities and realising its potential as a key growth catalyst for the economy moving forward.

Risk Assessment of the Financial System

In the midst of the deepening global financial market and economic turmoil, the Malaysian financial sector continued to remain stable and resilient. Pre-emptive measures were taken by the Government and the Bank during the year, which preserved confidence and stability in the financial sector. The banking sector's risk-weighted capital ratio (RWCR) remained resilient at 12.7% as at end-2008, with an excess capital position of RM38.8 billion to buffer against any potential unexpected losses. Profitability of the banking system grew by 8.3% to record an unaudited profit before tax of RM19.2 billion in 2008, partly moderated by lower revenue generated from investment and treasury-related activities. The exposure of the banking sector to foreign exchange risk was within manageable limits, with the net open position accounting for 4.6% of total capital base (2007: 4.9%). Throughout the year, the banking sector remained largely supportive of the financing requirements of the economy and continued to meet its financial obligations. Despite a slight moderation in the total approvals granted for new financing resulting from a decline in the growth of total applications for new financing, outstanding loans and financing grew at a high pace of 12.8% as at end-2008. The financing portfolio was mainly concentrated in the retail-based sectors and small and medium enterprises (SMEs), which accounted for 53.4% and 17.2% of total outstanding loans and financing respectively. Enhanced risk management capabilities contributed to the better loan quality of banking institutions, with the net non-performing loan (NPL) ratio declining to 2.2% as at end-2008 (2007: 3.2%). Capital enhancement programmes undertaken or being planned by banking institutions would further strengthen their ability to absorb potential risks that may arise from the economic slowdown moving forward and, importantly, would enable the banks to remain effective in performing their financial intermediation function.

The insurance and takaful sector, while maintaining a comfortable solvency position, faced challenges in maintaining the growth in premiums and contributions from new businesses, compounded by intense competition in the industry. Total net premium and contribution income grew by 2.4%, mainly attributed to the expansion in takaful business. However, the operating profit of the general insurance and takaful business, which declined by 44.5% to RM0.7 billion, was affected by the higher claims ratio of 84.2% (2007: 79.6%) arising mainly from higher motor vehicle claims.

The domestic financial markets remained orderly despite heightened price volatility, higher outflows and lower trading volume. This was supported by ample ringgit liquidity in the system. Liquidity in the US dollar market was, however, relatively consistent with the global tightening of the currency. The bond market continued to be a key source of financing for the corporate sector, with private debt securities (PDS) accounting for 57.8% of total outstanding PDS and banking loans to corporations.

The household and business sectors as a whole demonstrated high degree of capacity and flexibility to adjust to the challenges faced in 2008, having entered the challenging environment from a position of strength and supported by strong financial buffers. Despite revenue challenges and more volatile cost pressures, the debt servicing capacity of businesses was sustained at relatively comfortable levels in 2008. The gross NPL ratio for overall businesses declined to 6% as at end-2008 (2007: 8%), with a similar downward trend for SMEs to 6.8% (2007: 9.1%). Importantly, businesses continued to receive financing from the banking sector with a total of RM147.9 billion in new loans channeled to the business sector in 2008.

The household sector continued to be supported by healthy balance sheets with improved level of indebtedness. Amidst concerns over the employment outlook, demand for new financing declined as households became more vigilant of incurring higher debts. Households' gross NPL ratio continued to improve to 4.2% as at end-2008 (2007: 5.4%).

Moving forward, the Malaysian financial system is expected to remain resilient despite being confronted with the challenging environment which may likely pose greater pressures on revenues and higher delinquencies and defaults. The series of stress tests conducted confirmed that the financial system's ability to embrace these challenges remains sound.

These scenario-based tests on credit, market and liquidity risks were conducted at both the system and individual institution levels to provide a forward-looking assessment of the capacity of financial institutions to withstand potentially adverse and significant macro-financial shocks, as well as the resultant implications on earnings and capitalisation. The stress scenarios were constructed based on the potential magnitude and extent of spillover effects of the intensification of international financial market duress, prolonged slowdown in global and regional growth, persistent volatility in commodities and energy prices as well as expected price levels in the economy. Multiple scenarios based on domestic growth and financial market conditions that are comparable to the historical worst levels were applied.

Based on the stress test results, the financial system has the capacity and flexibility to adjust and cope with the stresses, even under a deeper economic contraction scenario. The banking system's RWCR is expected to remain above the minimum 8% requirement whilst core capital ratio would exceed 6%, before incorporating some of the capital enhancement programmes undertaken or being planned by the banking institutions. This is reinforced by the high quality of banks' Tier-1 capital, where the equity-to-assets ratio of the banking system was at 10% of total risk-weighted assets or 6.8% of total assets.

Internally, the Bank will continue to strengthen its macroeconomic surveillance and supervisory capabilities for the early detection of emerging risks to facilitate pre-emptive actions. Engagements and coordination arrangements between the Bank and other domestic and international regulatory authorities would also be enhanced to ensure that the financial system is well-positioned to manage the implications of the more difficult environment moving forward.

Development of the Financial Sector

During the year, the Bank's main policy focus was to ensure that the financial sector remained resilient and continued to perform its financial intermediation function effectively in supporting economic activities. Sustained efforts were also undertaken to build a resilient, effective and diversified financial system.

Concerted efforts throughout the year were taken to ensure that businesses continue to have adequate access to financing, in particular the SMEs which account for 99% of the total number of business establishments in Malaysia. The SME Assistance and Modernisation Facilities and the SME Assistance Guarantee Scheme were established in 2008 and 2009 respectively for this purpose. Two additional schemes, namely the Working Capital Guarantee Scheme and the Industry Restructuring Loan Guarantee Scheme, were launched in early-2009 to enhance the avenues for companies to obtain funds for working capital purposes as well as to promote high value-added activities. In addition, the Integrated Contact Centre established by the Bank and *ABMConnect* set up by the Association of Banks in Malaysia serve as important channels in strengthening the financial sector's interface with the public.

Measures taken during the year also included the provision of a blanket Government guarantee through the Malaysia Deposit Insurance Corporation (PIDM) on all ringgit and foreign currency deposits placed with financial institutions regulated by the Bank. Consistent with regional initiatives to preserve confidence in the respective financial systems during the current international financial turmoil, this pre-emptive measure was aimed at safeguarding stability and competitiveness of the domestic financial sector. The financial safety net was also extended to the insurance and takaful sector by allowing insurers and takaful operators to access the Bank's liquidity facility.

The Government has announced the establishment of a Financial Guarantee Institution (FGI), which will commence operations in the first half of 2009, to facilitate access to the bond market for viable corporations to raise funds. The FGI will provide credit enhancements to corporations' bond issuances which will reduce financing costs, address potential maturity mismatches and also diversify funding sources.

In terms of the insurance sector, the Bank continued to pursue consolidation and rationalisation to address the fragmentation in the general insurance sector. Efforts are also in progress to accord greater flexibility to general insurers to manage their expenses. Meanwhile, flexibilities have been granted for insurers to harness bancassurance as a key distribution channel, towards increasing insurance penetration in the country.

Recognising the importance of having a coordinated and collaborative approach to human capital development in the financial services industry, the Financial Services Education Centre (FSEC) was jointly established by the Bank and the Securities Commission to draw on the complementarities and strengths of various training institutes to provide high quality training solutions across the different segments of the financial services industry.

In line with the Malaysia International Islamic Financial Centre (MIFC) initiative, new international Islamic finance players continued to establish their presence in Malaysia during the year. The Bank also embarked on the initiative to develop Shariah Parameters to promote more consistent application of Islamic financial contracts. The establishment of the International Shariah Research Academy for Islamic Finance (ISRA) would also serve as a key platform to enhance interaction and exchange of ideas among industry players and scholars to promote applied research in the area of Shariah and Islamic finance.

Going forward, the Bank's commitment towards strengthening international linkages and supporting regional integration will be spearheaded by the liberalisation roadmap which aims to enhance the contribution of the financial services sector to the growth of the economy. In particular, the liberalisation roadmap intends to strategically position the financial sector to support the national objective of attaining developed economy status by the year 2020.

Prudential Regulation and Supervisory Framework

Amidst a more challenging financial environment, the Bank continued to preserve an appropriate balance between principle-based and rule-based regulations, paving the way towards progressively deregulating the financial sector moving forward.

The implementation of the Basel II framework remained on track with 77% of the banking institutions opting to adopt the Standardised Approaches for determining capital requirements whilst the remaining institutions will be adopting the Internal Ratings-Based (IRB) Approach for credit risk. The option to adopt the IRB Approach was also extended to Islamic banks that are part of banking groups adopting the IRB Approach to leverage on group infrastructures and policies. The Bank also outlined the approach for the implementation of the supervisory review process (Pillar 2) and disclosures on capital adequacy (Pillar 3) of the Basel II framework. In addition, the Capital Framework for Development Financial Institutions (DFIs) was introduced, which appropriately supports the specific nature of DFIs' mandates and operations.

In addition, details of the proposed capital framework for securitisation based on the Standardised Approach were released and a revision to the liquidity framework to promote further improvements in liquidity risk management practices is in progress for implementation in 2009. Coupled with these efforts, the Bank also embarked on the process of ensuring that the preconditions are in place for banking institutions to adopt FRS 139: Recognition and Measurement of Financial Instruments. The importance of inculcating sound risk management practices in banking institutions was further reinforced by PIDM's move towards risk-based premium pricing under its Differential Premium System.

In the insurance sector, the previous Margin of Solvency regime was replaced by the Risk-Based Capital (RBC) Framework on 1 January 2009. The framework provides for better alignment between insurers' underlying risk exposures with regulatory capital requirements and allows for insurers to operate at different risk levels that are commensurate with their risk management infrastructure and practices. Preliminary groundwork was also laid in 2008 for the development of a similar RBC Framework for takaful operators.

To enable the Bank to discharge its role effectively in maintaining financial stability in the years ahead, a holistic review of the Central Bank of Malaysia Act 1958 was completed during the year. The proposed Central Bank of Malaysia Act will provide greater clarity to the Bank's role in regulating and supervising financial institutions and promoting a sound and progressive financial system. Moving forward, prudential regulatory and supervisory priorities will remain focused on ensuring the Bank's and financial institutions' responsiveness to risks through ongoing enhancements to the regulatory framework and heightened supervision.

Payment and Settlement Systems

In the wake of the financial turmoil, the payment and settlement systems continued to function smoothly. The aim during the year was to ensure the continuous well-functioning of the payment and settlement infrastructure, with ongoing efforts being undertaken to enhance and modernise the systems to achieve greater efficiency and reliability. As a result, the Real-time Electronic Transfer of Funds and Securities (RENTAS) system, which clears more than 90% of total non-cash payments in the country, remained resilient without any major disruptions and achieved 99.9% system availability in 2008.

During the year, the Bank also established the Malaysian Electronic Clearing Corporation Sdn. Bhd. (MyClear) to operate RENTAS and the Cheque Truncation and Conversion System (eSPICK) as well as to spearhead the Bank's agenda of migration to electronic payments (e-payments). The establishment of MyClear further reinforces the Bank's oversight responsibilities and allows effective surveillance, independent assessment, evaluation and monitoring of the different types of risks on the major payment systems.

The pace of migration to e-payments was sustained with close collaboration with the Government to expedite the implementation and adoption of e-payments in the public sector. Public awareness on the wide array of online payment services by Government agencies was enhanced through the Government's "myBayar" promotional initiatives. The Bank has also been strongly advocating the higher usage of e-payments in the insurance and securities industries and has initiated and coordinated efforts with the relevant stakeholders to achieve this. Another encouraging area of growth for e-payments is mobile banking services offered by financial institutions, which is exhibiting potential to emerge as a mainstream payment channel.

Addressing the price distortion between paper-based payments and e-payments and having in place effective incentives to drive the migration to e-payments will be key focus areas of the Bank moving forward. The widespread adoption of e-payments will pave the way towards the development of a more efficient payment system which would ultimately improve the competitiveness of the economy.

Financial Stability Report

Risk Assessment of the Financial System

Risk Assessment of the Financial System

OVERVIEW

Stability in the Malaysian financial system continued to be preserved despite the challenging financial markets and economic environment, against the backdrop of the deepening global financial and economic turmoil. The failure or near-failure of a few large global financial institutions, which triggered a crisis of confidence in the global markets and caused sharp tightening in global liquidity and credit conditions, had no major systemic impact on the Malaysian financial system. This has been reinforced by pre-emptive and precautionary measures undertaken by the Government and Bank Negara Malaysia to preserve confidence and financial system stability. Overall liquidity remained ample. Financial markets remained orderly despite experiencing greater price volatility, higher outflows and lower trading volume during the year.

Financial system stability remains intact. The Malaysian financial institutions are well-placed to withstand the more testing times ahead, having entered the challenging operating environment on stronger fundamentals

The financial sector and financial markets continued to facilitate the intermediation of funds throughout the year. At the aggregate level, the household and business sectors demonstrated high degree of capacity and flexibility to adjust to the challenges that surfaced during the year, supported by strong aggregate financial buffers that were accumulated during the periods of favourable economic, business and labour market conditions.

The Malaysian financial sector exhibited strong capacity and higher degree of adaptability, both at the system and micro level, to withstand the rapid shifts in external and domestic risk factors that emerged during the year. The impact of the global financial turmoil on the domestic financial sector remained well-contained given the limited direct and indirect exposures to affected assets linked to the global financial turmoil as well as to the affected financial institutions. The level of capitalisation of the banking system remained high whilst the solvency position of the insurance and takaful industry was sustained at a comfortable level. Meanwhile, improvements in the quality of the banking system's financing portfolio continued with declining levels of non-performing loans (NPLs) underpinned by risk management capabilities and credit assessment processes which have been strengthened over the years and complemented by strong debt servicing capacity of borrowers.

Moving forward, the Malaysian financial system is expected to remain resilient despite being confronted with greater downside risks. Whilst the economic and financial conditions are expected to be increasingly challenging, the series of stress tests conducted at both the system and institutional levels confirmed that the risk-bearing capacity of the domestic financial system remains sound. The financial system has the capacity and flexibility to adjust to the changing environment and cope with the stresses that may surface from the economic slowdown. Of importance, is that the financial sector is well-positioned to continue meeting the financing and financial needs of the economy as well as its financial obligations at all times. In addition, the financial sector remains poised to be a key growth catalyst for the Malaysian economy.

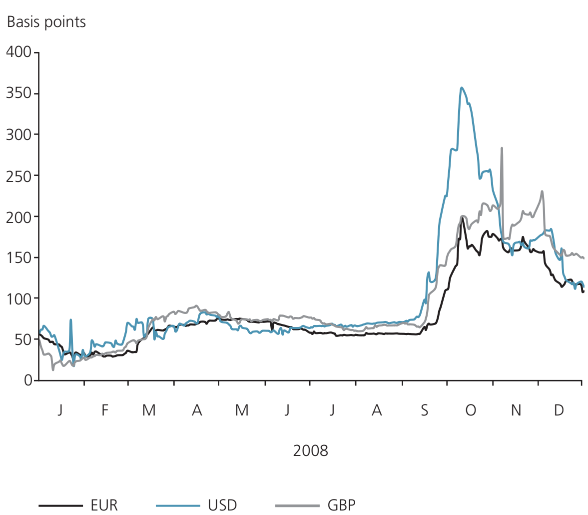
GLOBAL MACROECONOMIC AND FINANCIAL DEVELOPMENT

Global economy experienced a rapid shift from inflationary concerns to a sharp deterioration in growth conditions following further deepening of global financial crisis

The global economy was supported by robust growth in the emerging economies whilst the advanced economies experienced moderation in the first half of 2008. Growth in the emerging economies, led by PR China and India, were less affected by the international financial market turbulence. The rapid increases in commodity prices to high levels by mid-year, led to burgeoning inflationary pressures especially in the Asian region. The global economy, however, experienced a major and sharp turnaround in the second half of 2008 as these concerns dramatically shifted towards the risks to growth. The intensification of the global financial turmoil and the ensuing credit crunch led advanced economies into a synchronised global recession. The spillover effects on the emerging economies were swift and evident. The more open economies in Asia experienced an export-led slowdown. These developments, together with the unwinding of speculative activity in the commodity market, precipitated a rapid correction in commodity prices, resulting in large disinflationary pressures in most economies. Towards end-2008, most economies worldwide had embarked on large fiscal stimulus packages and monetary easing.

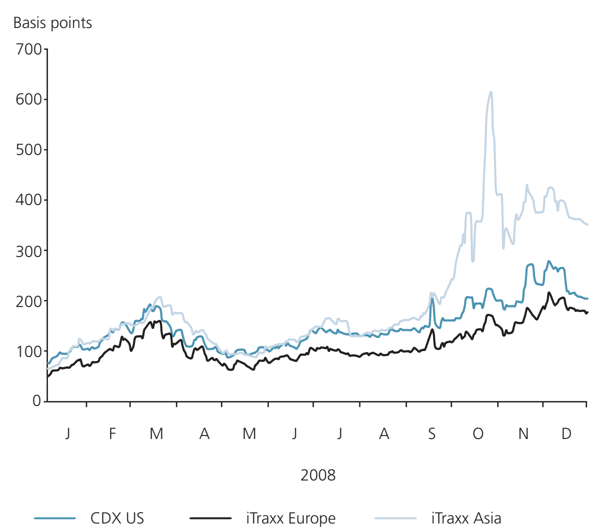
The year saw further deterioration in market sentiment and confidence as total write-downs and credit losses recognised by financial institutions worldwide escalated. With liquidity in international credit and money markets remaining tight and equity prices fluctuating in a bearish mode, financial institutions' access to interbank funding was strained considerably, thus threatening the solvency of some institutions. After a brief period of calm following measures in the US and Europe to ease stress in the global interbank markets, the international financial markets came under severe and destabilising stress towards the end of the third quarter, triggered by the collapse of a few large international financial institutions. As risk aversion magnified and fear of counterparty risks intensified, tightness in liquidity conditions in the global money markets became more acute (Chart 1.1). While the ensuing unorthodox actions and unprecedented policy initiatives to contain systemic risks and restore market confidence appeared to have eased the tight liquidity, conditions remained far from normal by end-2008. Market confidence was further undermined by concerns on the economic outlook. Global equity prices continued to decline whilst cost of default protection on investment-grade and high-yield corporate debt remained elevated amidst risks of significantly weaker business profitability and deterioration in credit quality (Chart 1.2).

Chart 1.1
3-month LIBOR less 3-month Overnight Index Swap (OIS)



Source: Bloomberg

Chart 1.2
Spreads on CDX and iTraxx for Investment-Grade Credits



Source: Bloomberg

Key Global Policy Measures

- **Guarantee schemes**
  - o Introduction of a blanket guarantee or expansion in the amount covered for existing guarantee on retail deposits.
  - o Provision of guarantee on financial institutions' new and existing short- and medium-term debt instruments and interbank borrowings.
- **Inter-central bank swap lines**
  - o Global central banks established reciprocal currency swap facilities to address any foreign currency liquidity shortages in the banking systems, particularly the US dollar.
- **Capital injections**
  - o Direct capital injection measures, with varying conditions and instrument-types across jurisdictions, were employed to support balance sheets of financial institutions. Some countries established funds and expressed commitments to recapitalise financial institutions should the need arise.
- **Direct purchase of commercial papers**
  - o The US Federal Reserve established Commercial Paper Funding Facility (CPFF) to purchase highly-rated unsecured and asset-backed commercial papers in efforts to ease liquidity problems in the US commercial paper market.
- **Monetary policy easing**
  - o Global central banks and monetary authorities adopted aggressive monetary easing in efforts to lower borrowing costs, ease cash flows and avert a sharp slowdown in economic activities.

DOMESTIC MACROECONOMIC AND FINANCIAL DEVELOPMENT

The Malaysian economy registered a favourable growth of 4.6% in 2008 amidst the international financial turmoil and rapid deterioration in global economic conditions

Robust domestic demand, in particular sustained private consumption and strong public spending, supported growth during the year. The economy expanded strongly by 7.1% in the first half of 2008 supported by strong performance of the services sector, expansion in trade and tourism activities, robust external demand from the non-US markets and higher exports of resource-based products which also benefited from the rising commodity prices. In the second half-year, the sharp and rapid deterioration in global economic conditions and major correction in commodity prices led to a contraction in Malaysia's export performance by the end of the year. Given the high degree of openness of the Malaysian economy, the contraction in exports adversely affected income and domestic demand. On the supply side, export-oriented manufacturing industries weakened in line with the deterioration in global demand and the sharp correction in commodity prices. While the services sector continued to support the economy, growth moderated due to the slowdown in the services sub-sectors that were dependent on trade and capital market-related activities. Private investment activities slowed significantly while private consumption moderated in the fourth quarter of 2008.

Headline inflation averaged 5.4% for the year. Inflation was already on an uptrend in the first five months of 2008, as supply-related factors led to the steady increase in global food and fuel prices. The inflation rate, however, rose sharply in the third quarter following the 40.4% adjustment to retail fuel prices in June and the revision to electricity tariffs in July. Inflation peaked at 8.5% in July before moderating as domestic food and fuel prices declined in the fourth quarter following the correction in global commodity prices. Meanwhile, the external position remained strong in the first half of 2008 amidst large current and financial accounts surpluses. Nevertheless, the overall external position recorded a net deficit in the second half-year due to large net outflows in the financial account arising from intensification of the deleveraging activities by foreign financial institutions, which more than offset the surplus in the current account. The Overnight Policy Rate (OPR) was reduced by a total of 150 basis points in 2008 (November) and early-2009 (January and February). The Statutory Reserve Requirement was also lowered concurrently to 1%

effective 1 March 2009. These adjustments were aimed at providing the monetary stimulus to support domestic demand, given the increased downside risks to growth in an environment of rapidly diminishing inflationary pressures. Please refer to the Bank Negara Malaysia Annual Report 2008 for a more detailed account on the domestic macroeconomic developments.

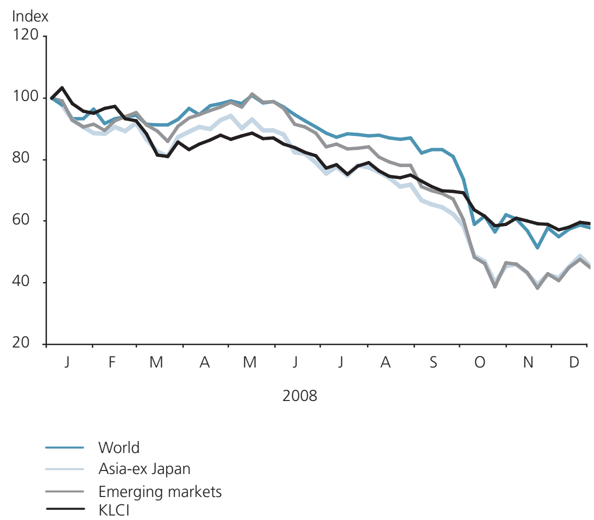
Financial markets remained orderly despite heightened volatility and lower trading liquidity

The domestic financial markets were not insulated from the higher asset price volatility and lower trading liquidity that were driven by rapid shifts in the domestic and global risk factors. Despite the challenging environment, funding liquidity for ringgit remained ample, with the domestic financial markets continuing to facilitate financial intermediation, whilst liquidity in the US dollar market remained consistent with the global tightening situation.

In the domestic equity market, the upward momentum from the second half of 2007 continued in the early part of 2008. The Kuala Lumpur Composite Index (KLCI), which was supported mainly by the plantation counters following increasing commodity prices, peaked at 1,516.2 points in January. The trend reversed as global and domestic developments unfolded in the ensuing months. As commodity prices escalated, market sentiments were further exacerbated by concerns on implications of rising cost pressures on cash flows of businesses.

The domestic equity market was not insulated from the global events in September and October, which caused massive indiscriminate sell-offs in global equity markets. These events led to significant downward pressure on the KLCI. Easing inflationary pressures and the various international and domestic stimulus packages as well as the measures introduced by several major central banks to avert a sharp slowdown in the global economy had somewhat improved sentiments. The KLCI stabilised towards the end of 2008 to conclude the year at 876.8 points. Market capitalisation contracted by 39.3%, a relatively better performance within the region (Chart 1.3). Volatility in the equity market, however, remained elevated amidst heightened risk aversion and uncertainty. Equity market volatility averaged 20.5% for the year (2007: 16.3%) (Chart 1.4).

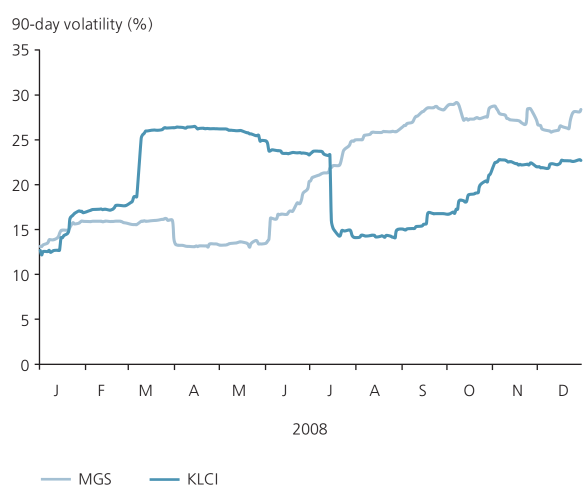
Chart 1.3
Performance of Global Equity Markets



Source: Bloomberg

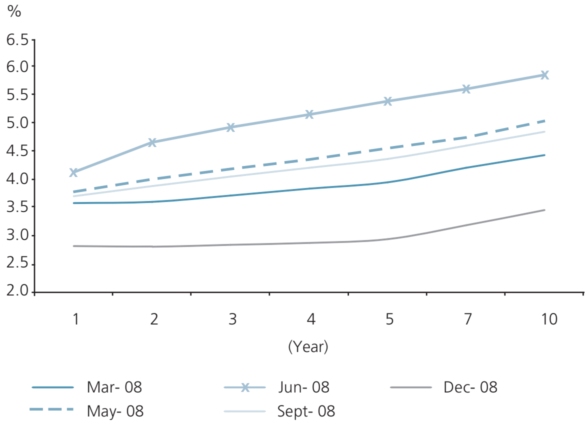
The government bond market remained generally resilient despite experiencing some swings in yield movements during the year. Average volatility in benchmark Malaysian Government Securities (MGS) yields rose slightly to 20.8% in 2008 (2007: 20.1%) (Chart 1.4). In the early part of the year, the MGS saw a brief rally due largely to rebuilding of

Chart 1.4
Volatility in KLCI and MGS



Source: Bloomberg

Chart 1.5
Interest Rate Swap Curve

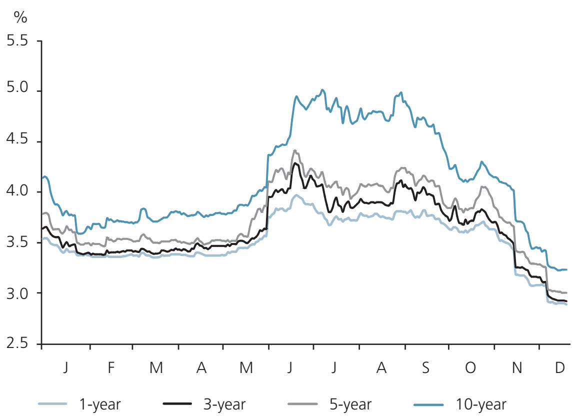


Source: Bloomberg

portfolios. As inflationary pressures rose, interest rate swaps and MGS yields trended upwards on expectations of possible tightening of monetary policy (Charts 1.5 & 1.6). The yield curve also steepened, reflecting increased inflation premium, particularly for longer-tenured papers. Expectations of increased government borrowings to finance a revised fiscal position for 2008 led to some concerns of potential oversupply in government bonds, exerting further upward pressures on yields. Such concerns nonetheless gradually eased as intensified risk aversion in September and October quickly induced flight-to-quality demand for government papers. In the primary market, demand for government bonds remained strong in spite of significantly higher net issuances (2007: RM25.8 billion, 2008: RM36.6 billion) during the year. The bid-to-cover ratio for MGS remained favourable at 1.95 times (2007: 1.97 times). At the same time, domestic inflationary pressures abated as crude oil prices retreated from the peak since mid-July, leading to several downward adjustments in retail fuel prices. The reduction of the OPR in November, meanwhile, saw increased expectations of further easing in monetary policy. Reflecting these developments, interest rate swaps and MGS yields normalised in the last quarter of the year.

In the Private Debt Securities (PDS) market, movements in yields for the first half of the year were generally in tandem with that of MGS yields. Mid-year, sentiments in the PDS market weakened following announcements of the imposition of windfall tax on the independent power producers (IPPs), potential reduction of toll rates and cap on water concessionaires' profits. PDS yields consequently rose on account of uncertainty. Sentiments subsequently improved, particularly on higher-rated bonds, following the withdrawal of the windfall tax and as concerns over inflationary pressure subsided. Nonetheless, yield spreads of PDS against MGS widened significantly in the last quarter of the year, reflecting flight-to-quality (Chart 1.7). Yields on lower-rated segments remained elevated on concerns over possible weakening in corporate credit quality.

Chart 1.6
MGS Yields



Source: Bloomberg

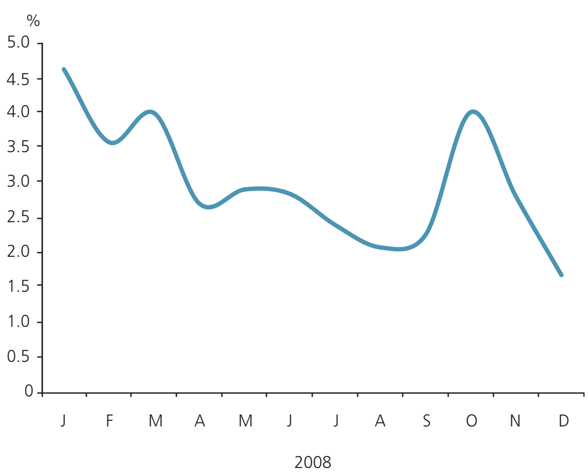
Chart 1.7
Spreads of AAA-rated PDS against MGS

Source: Bloomberg

The accelerated global deleveraging process and heightened investors' risk aversion, which led to some indiscriminate unwinding of investments by non-residents, contributed further to volatility in the domestic financial markets. Portfolio investments registered a net outflow of RM92.4 billion in 2008 (2007: net inflow of RM18.4 billion). The unwinding of investment positions nonetheless did not result in any material destabilising implications on the domestic financial markets, which continued to function in an orderly manner.

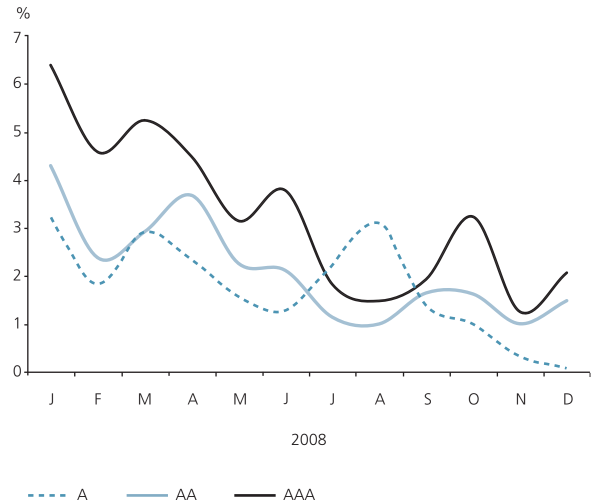
Asset price volatility in the domestic PDS and equity markets was also accompanied by lower trading liquidity amidst diminishing risk-taking appetite and accelerated deleveraging process. The decline in liquidity manifested both in terms of trading volume as well as prices. The monthly ratio of turnover value to market capitalisation for KLCI averaged at 3% in 2008, lower than the 3.8% posted in 2007 (Chart 1.8). In the PDS market, the average monthly turnover ratio (computed as ratio of turnover value to outstanding bonds) declined significantly to 2.2% (2007: 4.4%). The decline in trading liquidity was broad-based. Lower turnover ratio was observed across all credit profiles including in the Islamic debt market (Charts 1.9 & 1.10). Whilst AAA- and AA-rated papers saw some improvement in trading volumes towards the end of the year, conditions remained tight for A-rated credits. Amidst contraction in volumes transacted and re-pricing of risks by market participants, there was also widening of the bid-ask spreads (Charts 1.11 & 1.12).

Chart 1.8
KLCI Monthly Turnover Ratio



Source: Bloomberg

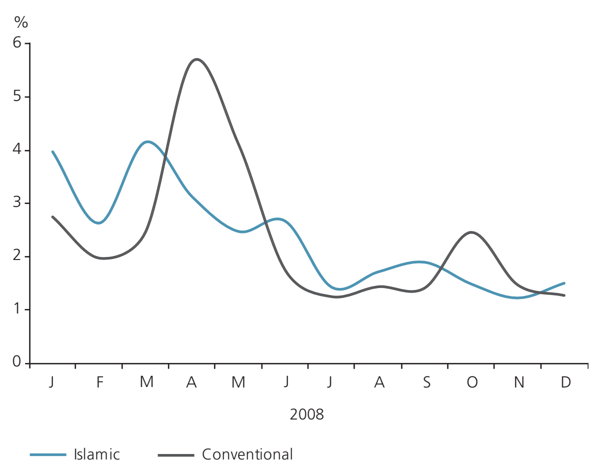
Chart 1.9
Turnover Ratio for PDS (by credit profile)



Source: Bond Pricing Agency Malaysia and internal computation

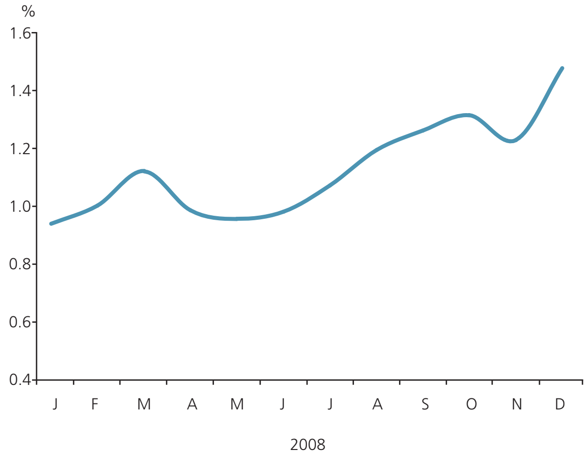
The domestic cross-currency swap market also experienced a marked increase in basis spreads. Early-2008 witnessed Asian financial institutions and corporations seeking alternative financing in Samurai bond markets amidst sustained tightness and increased borrowing costs in the US dollar

Chart 1.10
Turnover Ratio for PDS (by principle type)



Source : Bond Pricing Agency Malaysia and internal computation

Chart 1.11
KLCI Monthly Bid-Ask Spread[1]

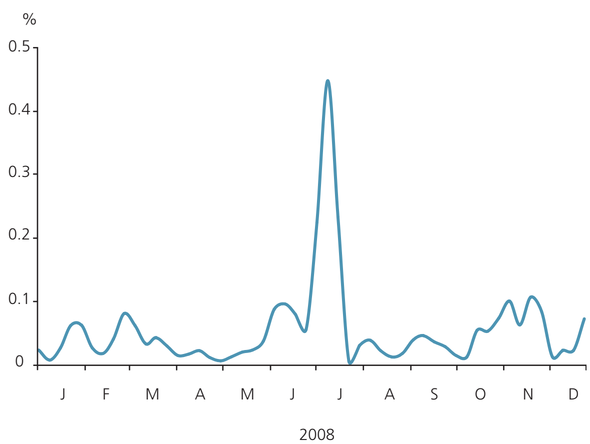


[1] Computed as ratio of difference between bid and ask price to mid price (average of bid and ask price)

Source: Bloomberg

bond markets. Given the attractiveness of the relatively untapped market and the narrow basis spreads for cross-currency swap in early-2008 (Chart 1.13), the domestic PDS market saw increased interests from a number of Asian financial institutions in raising ringgit-denominated bonds and thereafter swapping the ringgit proceeds into US dollars.

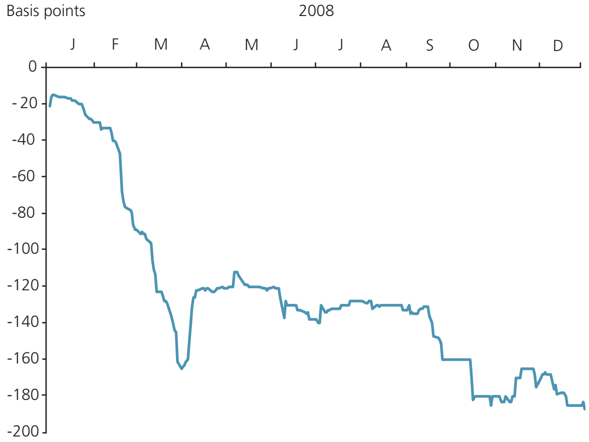
Chart 1.12
Intraday High-Low Spreads[1] for AAA-rated PDS



[1] Computed as ratio of difference between high and low price to mid price (average of high and low price)

Source: Bloomberg and internal computation

Chart 1.13
5-year Cross-Currency Swap



Source: Bloomberg

Basis spreads widened significantly since January, reflecting increased demand for cross-currency swaps. Basis spreads normalised subsequently in April following the postponement of PDS issuances by some non-residents. In September and October, the accumulation of US dollar assets by global financial institutions and rapid deleveraging as a result of portfolio rebalancing contributed to marked tightening in US dollar liquidity in international markets. Thus, basis spreads in cross-currency swap market widened, reflecting a general increase in global US dollar funding costs, rather than shortages of onshore supply of US dollars.

Despite bouts of heightened volatility and lower trading volumes, funding liquidity remained sufficient. The domestic financial markets continued to facilitate financial intermediation throughout the year, amidst increased investors' risk-averse tendencies. Both the primary PDS and equity markets remained generally accessible for corporate funding, albeit at higher costs. Total number of PDS issuances amounted to 271 in 2008, moderating from 323 in 2007 whilst new issuance of shares (excluding warrants) declined to RM5.2 billion (2007: RM7 billion). In the PDS market, while concerns on potential deterioration in the credit outlook began to emerge especially in the fourth quarter given the more challenging economic environment, this has yet to translate into widespread defaults. The number of defaulted corporate debt securities was in fact lower at nine in 2008 as opposed to 11 default incidences in 2007.

In the ringgit money market, liquidity remained ample. Reflecting firm domestic fundamentals, the cost of obtaining short-term liquidity in the ringgit interbank market continued to track policy rates very closely throughout the year.

Non-financial sectors

In 2008, the business sector was tested with spiralling costs of production and raw materials following the hike in fuel and energy prices during the first half of the year. This was exacerbated by rising costs of funding and refinancing through the capital market as yields rose. The financial health of businesses came under pressure by the global economic slowdown that adversely affected the order books of corporations and enterprises especially in the last quarter of the year. Meanwhile, households' debt servicing capacity was affected by greater inflationary pressures in the first half of the year and the weakening employment outlook in the later half.

The household and business sectors demonstrated continued resilience in 2008 having entered the challenging environment from a position of strength and with strong balance sheets. Strong financial buffers amassed over the years of strong growth amidst favourable business and labour market conditions have largely enabled households and businesses in the aggregate to adapt flexibly and favourably to the cost and revenue pressures experienced during the year.

Businesses faced volatile prices and increased revenue challenges

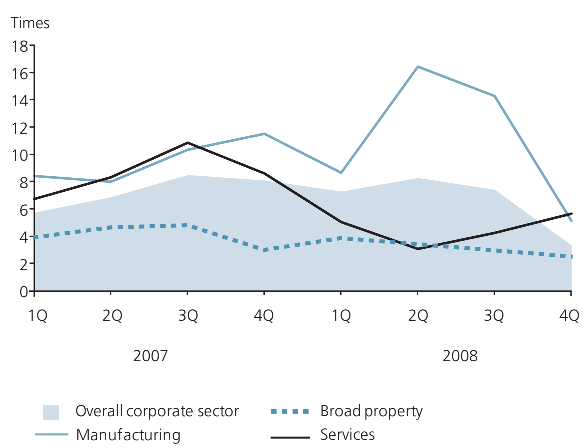
Years of profit performance, build-up of retained earnings and improvements in operational capacity and efficiency following structural reforms and business reengineering have strengthened the balance sheets of businesses. This has accorded Malaysian corporations with the added capacity and flexibility to respond to challenges arising from escalating input and production costs, and contraction in demand. Shareholders' funds grew at an average annual rate of 11% between 2003 and 2007, before retreating by 1% in 2008. Meanwhile, the leverage position remained healthy with the median debt-to-equity ratio position sustained at less than 50% as at year-end (Chart 1.14). Given the stronger balance sheet, the debt servicing capacity of the corporations was sustained at relatively comfortable levels in 2008, with the median current ratio sustained at 1.7 times, moderating only marginally from the three-year average of 1.8 times. In addition, interest coverage ratio remained at a comfortable level of 3.4 times, albeit posting a significant decline in the final quarter of 2008 as earnings before interest and tax (EBIT) fell sharply on account of lower demand and sales (Chart 1.15).

The aggregate level of non-performing loans (NPLs) of businesses continued to trend downwards during the year (Chart 1.16). With

Chart 1.14
Debt-to-Equity Ratio for Selected Sectors

Source: Bloomberg

Chart 1.15
Interest Coverage Ratio for Selected Sectors



Source: Bloomberg

the NPLs declining by 15.4%, the gross NPL ratio of businesses eased further to 6% as at end-2008, the lowest level since the 1997 Asian crisis. Similarly, the quality of loans to small and medium enterprises (SMEs) strengthened further with the gross NPL ratio of 6.8% as at year-end (Chart 1.17).

Improvements in operational capacity and accumulation of financial buffers in recent years contributed to comfortable level of debt servicing capacity of businesses amidst more volatile cost pressures and increased revenue challenges

After the peak earnings in 2007, the level of profitability and performance of the corporate sector held up fairly well in the first half of 2008 before beginning to show some signs of strain by the fourth quarter of the year (Charts 1.18 & 1.19). Profitability deteriorated further in the final quarter as impact from the earlier rise in fuel costs and electricity tariff, and the drop in sales and revenue started to set in. EBIT of 120 companies tracked by Bank Negara Malaysia (representing 72% of Bursa Malaysia market capitalisation) remained fairly steady within the positive territory before declining by 35% in the fourth quarter to RM7.2 billion. These companies recorded a net loss position of RM201 million, skewed mainly by the high and exceptional losses incurred by a few large companies on foreign exchange translation and derivatives losses, impairment charges on investments and provisions for stockholding and inventory losses.

The year 2008 saw some moderation in the earnings of the property and construction sectors, as players grappled with the twin effects of rising costs and slowing demand. Turnover and profits were lower due to deferment in property launches reflecting the 8.5% drop in property sales in 2008 (Table 1.1). Margins were affected by the significant rise in building material costs partly following the

Chart 1.16
Business NPLs

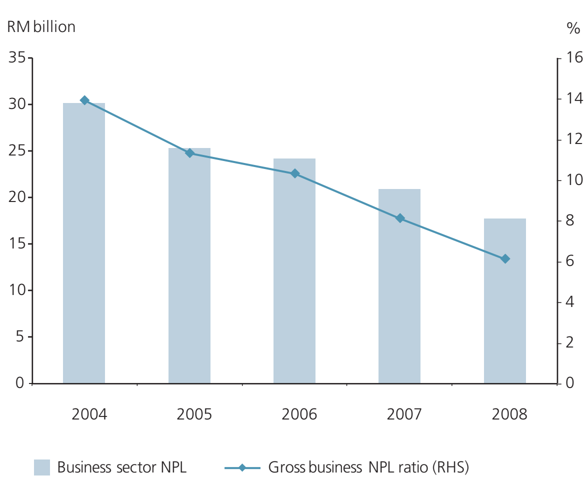


Chart 1.17
SME NPLs

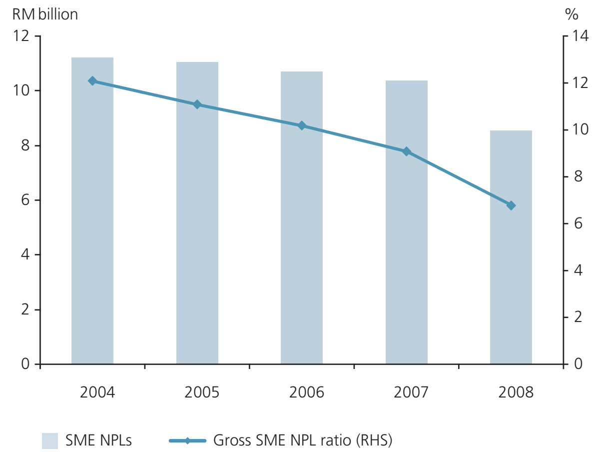


Chart 1.18
Profitability for Selected Companies

Source: Bloomberg

Chart 1.19
Return on Assets for Selected Sectors

Source: Bloomberg

liberalisation of the pricing structure for steel and cement and disruptions in projects' schedules. The strong financial buffers built over the recent years and the more disciplined borrowing practices ensured that the leverage ratio of property companies remained manageable at below 50%. These strong financials place the developers in a stronger position to withstand the slowdown anticipated over the next two years, but more significantly, to be in readiness to seize the opportunities as recovery occurs.

Meanwhile, Malaysian steel producers enjoyed exceptional profits in the first half of the year as soaring prices and strong regional demand ensured strong revenue streams. Likewise, the crude palm oil (CPO) industry benefited massively from the commodity boom. The windfall

Table 1.1
Residential Property Transactions and Sales Performance

	2007	2008*p*	Growth (%)
Residential property transactions			
Units	*199,482*	*216,702*	*8.6*
Value (RM billion)	*36.5*	*41.3*	*13.2*
Sales performance	45.1%	44.5%	
Units launched	*52,664*	*48,830*	*-7.3*
Units sold	*23,749*	*21,725*	*-8.5*

p Preliminary

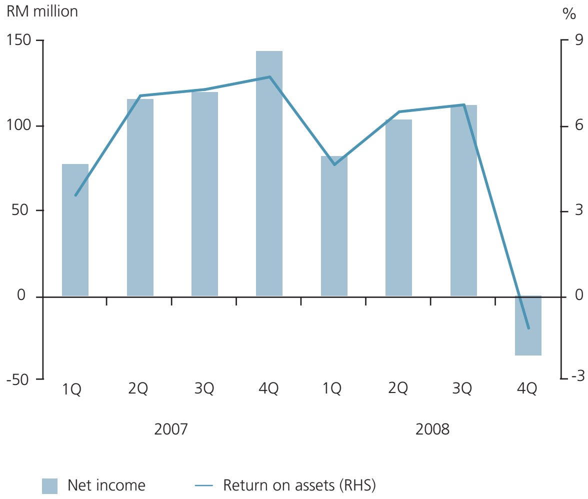
Source: National Property Information Centre (NAPIC), Valuation and Property Services Department

performance was, however, abruptly interrupted as prices of these commodities underwent a sharp reversal triggered by the sharper-than-expected contraction in global economic activities. By end-2008, the prices of steel and CPO had fallen by about 40% to 50% from the record peaks in 2008. Following the rapid pace of the price correction, many of the large steel players that are listed on the exchange were hit by hefty inventory write-downs, resulting in losses in the fourth quarter. Similarly, CPO producers recorded weaker earnings on a quarter-on-quarter basis, albeit less severe. The 'downcycle' for the construction and building materials sectors, including the steel sector is likely to be temporary given the many stimulus packages introduced by economies globally, including Malaysia. These are likely to have a positive impact on the prices of and demand for steel and hence the financials of players in the steel industry. By early-2009, CPO prices had also recovered from the lows and subsequently stabilised at about RM1,800 level. While prices are still well below the recent highs, CPO producers continue to be profitable at the current price level, helped in part by the 20% to 30% decline in cost of fertilisers and continuing efforts to gain process efficiencies. In addition, the balance sheets of most major CPO players also carry minimal debts, placing these players on a strong position to withstand the cyclical downturn.

The electrical and electronics (E&E) companies remained exposed to the deepening global economic slowdown. Exports of E&E products in the fourth quarter contracted sharply by more than 20% compared to the preceding quarter. This was also reflected in the net earnings of listed E&E players as replenishment of order books slows and earnings visibility diminishes (Chart 1.20). Elsewhere, sectors such as automotive, media and broadcasting were still benefiting from the robust demand for cars and advertising expenditures in the first nine months of 2008. However, signs of weakening demand had begun to emerge in October 2008.

While many sectors were affected by the moderation in economic activities, some sectors that are more defensive in nature have generally displayed earnings resilience. These include the retailers; packaged food and beverage, tobacco and liquor manufacturers; rubber glove producers; gaming operators; oil and gas support service providers; toll road concessionaires and the IPPs. The retail industry recorded a strong 12.2% growth in EBIT whilst net profit grew 34.3%, benefiting largely from the festive periods and outlet expansions.

Chart 1.20
Profitability of Selected Companies in the E&E Segment

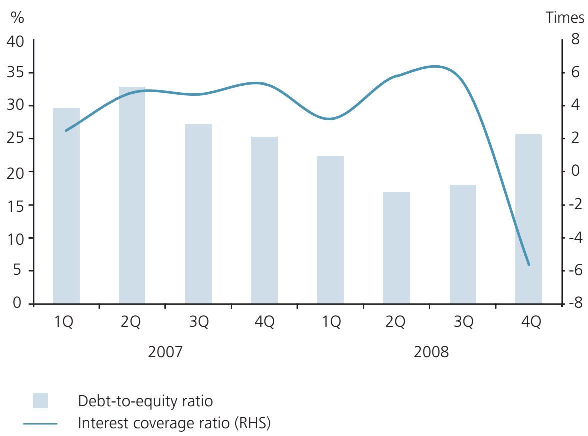


Source: Bloomberg

Businesses also faced higher cost of credit and refinancing of debts from the capital market as risk-averse investors demanded higher yields. While the reduction in the OPR helped in partly cushioning some of the impact of the heightened risk aversion, increased concerns over the outlook of the domestic economy saw the spreads for 5-year AAA-rated papers increasing by 63.4 basis points and that of AA-rated papers rising by 95.2 basis points in the fourth quarter. This was also accompanied by some moderation in the volume of funds raised in the PDS market during the year. Financing from the banking system for large businesses and the SMEs remained highly accessible as reflected by the 18% increase in loan disbursement to businesses (2007: 4.3%) and 13.2% increase in outstanding business loans (2007: 10.3%). A total of RM147.9 billion of new financing was granted to businesses in 2008 primarily for working capital and trade-related activities. Apart from the financial strengths, the continued access to financing has also been supported by improved relationship banking, which strengthened the knowledge and understanding of the operating conditions and requirements of businesses by banking institutions. The SMEs also benefited from the special funds created by the Bank in the second half of the year to ensure continued financing availability for viable but high risk business ventures (Chart 1.22).

The level of credit risk and delinquencies in the business sector is likely to rise in 2009 given the more challenging economic environment. While this may be the case, the impact of the increased risks will be partly cushioned by the financial buffers amassed over the last few years of strong growth and profitability. The increase in the level of credit risk going forward is reflected by the gradual downward movement in the

Chart 1.21
Leverage Position and Interest Coverage Ratio of Selected Companies in the E&E Segment



Source: Bloomberg

Chart 1.22
Growth in Outstanding Loans to Large Businesses and SMEs

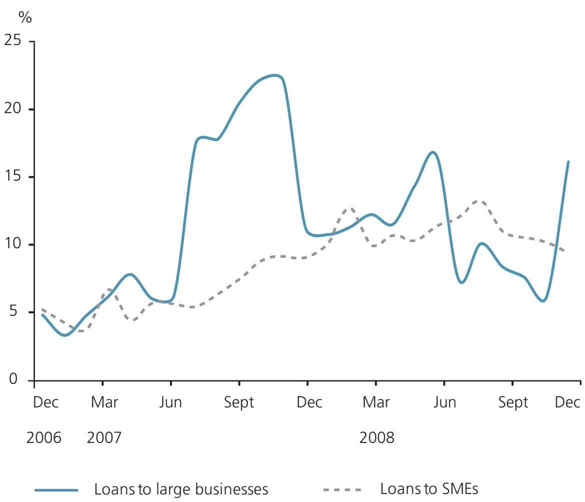
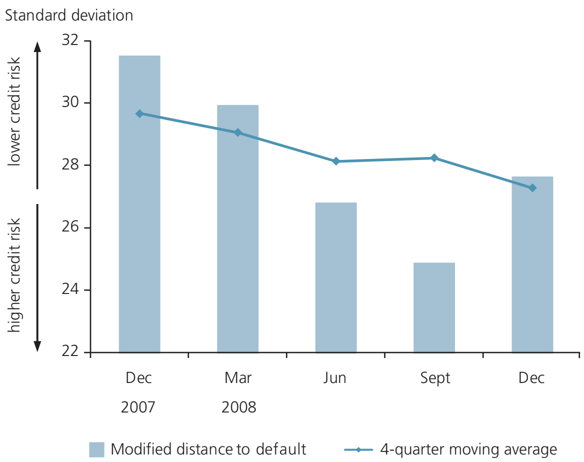


Chart 1.23
Weighted Average Modified Distance to Default of Selected Companies



Source: Bloomberg and internal computation

modified distance to default, a forward-looking indicator of corporate credit default risk (Chart 1.23). The movement and distribution of z-scores in the fourth quarter indicate a similar moderate increase in the average level of corporate credit risk going forward (Chart 1.24). A more detailed explanation of the modified distance to default and the z-score is provided in the box article "Forward-Looking Measurement of Corporate Sector Soundness".

Chart 1.24
Z-score of Selected Companies

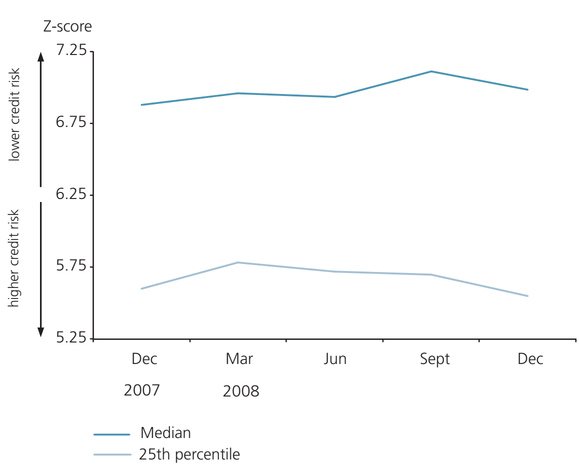
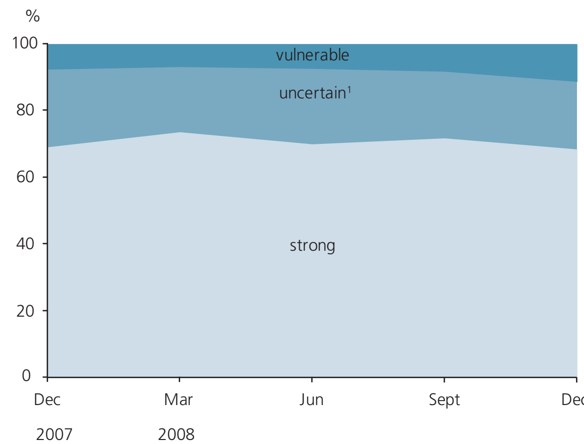


Chart 1.25
Distribution of Z-score of Selected Companies by Category



[1] Refers to the proportion of companies falling within the range whereby the z-score model is unable to categorise the company as either strong or vulnerable with a high degree of certainty

The proportion of companies categorised as strong by the z-score model fell moderately from 72% as at end-September to 69% as at end-2008, with a commensurate increase in the percentage of companies categorised as vulnerable to 11% (Chart 1.25). These movements are consistent with the weaker corporate sector performance in the final quarter of 2008 and the weaker business conditions going forward.

The healthy balance sheet positions, strengthened operational capacity and efficiency, and structural flexibility would contribute towards the resilience of the business sector. This would be further boosted by the RM67 billion fiscal stimulus announced by the Government in November 2008 and March 2009 and the series of measures that have been instituted by the Bank to mitigate the impact of the moderation in economic growth on Malaysian businesses, especially the SMEs, by providing new business opportunities through expansionary macroeconomic policies, improving cash flows, reducing the cost of doing business and ensuring continued access to financing by viable business enterprises.

Healthy balance sheets of households with improving indebtedness

Similar to the business sector, the household sector entered the more challenging economic phase

Forward-Looking Measurement of Corporate Sector Soundness

The Bank continues to accord emphasis on enhancing the forward-looking capability of its surveillance framework. This includes having a more robust assessment of risks in the corporate sector, which may have an impact on the stability of the overall financial system. Forward-looking models such as the z-score and modified distance to default provide important insights on emerging stress and risks, thereby providing sufficient lead time for the Bank to formulate appropriate policy measures pre-emptively to avert, mitigate or manage such threats. The quantification and measurement of risks enable more robust stress tests to be performed to assess the direct and possible feedback effects from plausible shocks to the system. The predictive power of the z-score and modified distance to default models in assessing future levels of credit risk have been established in numerous research and academic literature.

Z-score for Emerging Markets

The z-score measures the degree of vulnerability of a particular business or an industry segment by categorising firms into two distinct clusters, namely strong and vulnerable firms, based on the historical default experience. The construction of the z-score used by the Bank is referenced on the model developed by Altman for emerging markets[1] and employs the multiple discriminant analysis as an underlying statistical tool to derive a linear combination of financial ratios that best discriminate between the two categories. The multiple discriminant analysis improves on the traditional approach of individual or sequential analysis of financial ratios by reducing the reliance on rules of thumb and subjective judgement in determining the threshold levels and relative importance of the ratios. Selected key financial ratios are subsequently consolidated into a composite score to provide a snapshot of a firm's financial health. The discriminant function for the z-score for emerging markets based on the study conducted by Altman is given by the following equation:

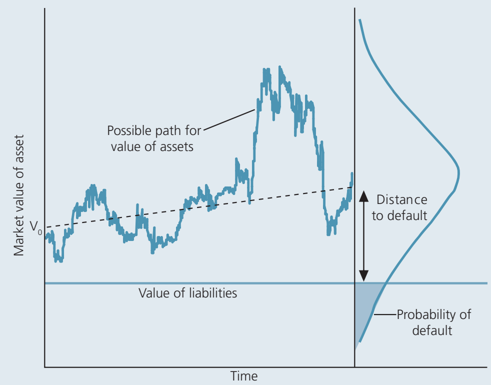
$$3.25 + 6.56\left(\frac{\textit{Working Capital}}{\textit{Total Assets}}\right) + 3.26\left(\frac{\textit{Retained Earnings}}{\textit{Total Assets}}\right) + 6.72\left(\frac{\textit{Operating Income}}{\textit{Total Assets}}\right) + 1.05\left(\frac{\textit{Equity}}{\textit{Total Assets}}\right)$$

Based on the z-score, both strong and vulnerable firms can be identified, whereby a higher z-score indicates a lower likelihood of the firm encountering financial distress.

Modified Distance to Default

The distance to default, based on the methodology developed by Merton[2], measures the potential default by a firm on its debt obligations using the option pricing model. The equity value of a firm is assumed to equal the value of a European call option on the firm's assets, with the value of its debts as the strike price. The incidence of default is said to occur when the value of the firm's debts exceeds the market value of its assets. The distance to default reflects the extent to which the market value of a firm's assets exceeds its debts, measured in terms of standard deviation of the asset value. The graphical representation of this concept is illustrated in Chart 1.

Chart 1
Merton's Distance to Default



[1] Altman, Hartzell and Peck (1995) "Emerging Markets Corporate Bonds: A Scoring System"
[2] Merton (1974) "The Pricing of Corporate Debt: The Risk Structure of Interest Rates"

Using the Black-Scholes-Merton methodology and applying simplifying assumptions as proposed by Byström[3], the modified distance to default is calculated as expressed by the following equation:

$$DD_{MODIFIED} = \frac{\ln(L)}{(L-1)} \frac{1}{\sigma_E}$$

where L is the leverage ratio (book value of debts expressed as a percentage of market capitalisation and the book value of debts) and σ_E is the annualised 90-day historical volatility of equity returns. Firms with shorter distances to default are assessed to be associated with higher credit risk and hence a greater probability of default.

Observations on Corporate Sector Soundness

Movements in the median z-score and weighted average modified distance to default are tracked to detect changes in the direction and average level of credit risk both at the macro as well as industry and company specific levels. In addition, Altman z-scores at the 75th and 25th percentile are also used to monitor the changes in the level of credit risk for firms with higher and lower credit quality, enabling a more complete assessment across different credit qualities.

The series of structural, operational and financial reform measures instituted following the 1997 Asian financial crisis have substantially contributed to the strengthened performance and financial health of Malaysian corporations. Over the 1997 to 2008 period, the z-score and modified distance to default calculated for more than 230 companies listed on Bursa Malaysia (accounting for over 80% market capitalisation) have improved (Chart 2 and Chart 3). The improvement in credit risk levels is also reflected in the improving credit quality of the banks' business loan portfolios during the period. The level of non-performing business loans has declined at an annual pace of 7%. As at end-2008, the gross non-performing business loans ratio has declined to 6% from its peak of 15.3% in 1998.

Chart 2
Business Sector Gross NPL Ratio and Z-score

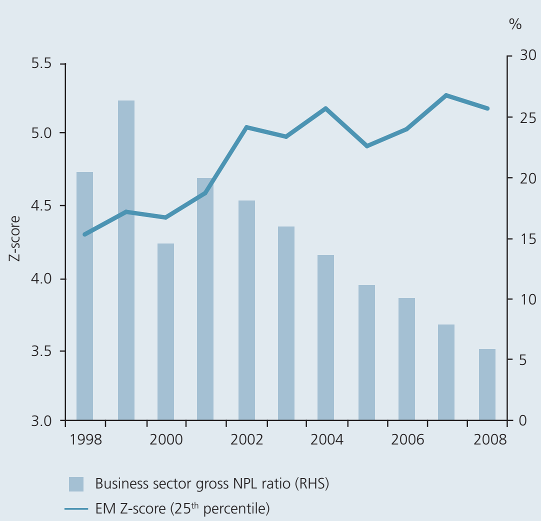
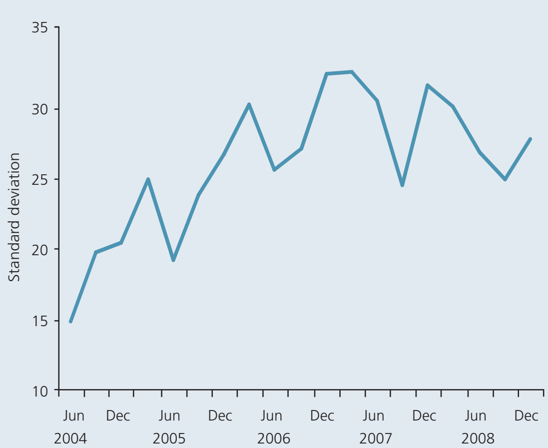


Chart 3
Weighted Average Modified Distance to Default



[3] Byström (2006) "Merton Unravelled: A Flexible Way of Modelling for Default Risk"

Refinements to Z-score and Modified Distance to Default Models

While there is useful information that can be derived from the usage of such models in carrying out surveillance and risk assessments, such models primarily complement the main efforts in fundamental analysis of quantitative and qualitative factors. Experiences during the current global financial turmoil have underscored the importance of having in place financial and risk models that remain sufficiently robust and dynamic in extreme market conditions where specifications and assumptions tend to deviate from the norm.

As the discriminant function of Altman's emerging market z-score was developed using data drawn from various emerging markets, an area of focus now is the development of a model which more accurately reflects the specific conditions, risk characteristics and phase of development of Malaysian businesses. Given the varying business characteristics across different industries, the Bank would also develop industry specific z-scores based on the financial statements and default experiences of Malaysian businesses.

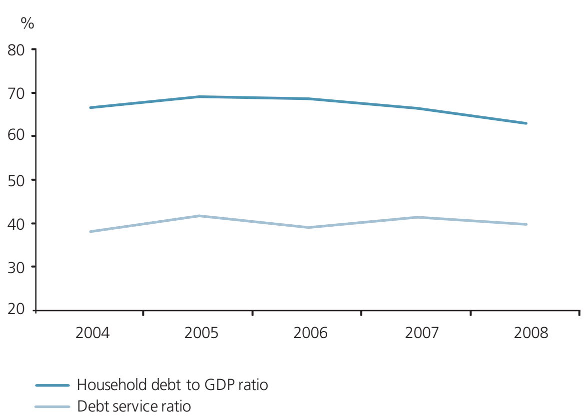
Recognising that the modified distance to default model relies on equity prices, which do not necessarily embody all information relevant to a firm's future performance but includes other factors such as market liquidity and investor sentiment, the Bank will be implementing enhancements to the model. The Bank will embark on an exercise to map the modified distance to default model to historical incidences of bond and loan defaults by Malaysian businesses, thereby enabling estimates of default probability and frequency to be more reflective of the future level of non-performing loans in the corporate sector.

These efforts in enhancing the accuracy and predictive power of the models would contribute to the Bank's effective use of surveillance and risk assessment tools in its continuous monitoring of the stability of the financial system.

with a healthier balance sheet and financial position. The level of household indebtedness has somewhat moderated as households embarked on consolidating their financial positions and obligations. The household debt-to-gross domestic product ratio has continued to stabilise at around 66%. The increase in general price levels and the subsequent concerns over the employment outlook led households to reassess their financial capacity especially to weather the more difficult economic conditions. The precautionary behaviour resulted in the more moderate growth in demand for new financing of 18.8% in 2008 from as high as 39.4% in the preceding year. This was also influenced by the bearish and lacklustre performance of the equity market which saw a decline in the market capitalisation of the KLCI to RM473.6 billion at the close of the year.

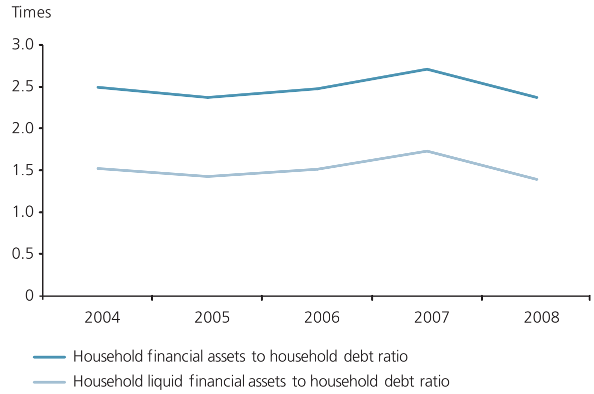
Disposable income grew within reasonable range for the year, largely supported by the high commodity prices and favourable economic conditions. This provided enhanced support to the households' debt servicing capacity. The ratio of loan repayments-to-disposable income has also continued to improve in recent years (Chart 1.26). The sustained debt servicing capacity was also reflected in the financial assets-to-debts ratio, which continued to remain high at 2.4 times as at end-2008 (Chart 1.27). The strong initial position more than offset the small decline of 4.1% in household financial assets during the year as the value of their investments in equity and unit trust funds declined.

Chart 1.26
Household Indebtedness and Debt Service Ratio



Source: Internal estimates

Chart 1.27
Household Financial Assets to Household Debt Ratio



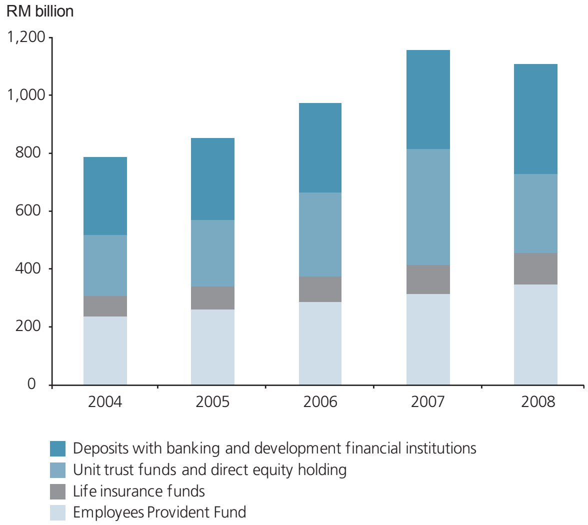
Source: Treasury Housing Loans Division, Employees Provident Fund, Securities Commission Malaysia and internal estimates

The level of liquid assets remained ample at 140% of household debts to constitute 60% of household financial assets. The increase in disposable income in recent years has enabled households to accumulate savings as reflected in the average annual increase of 9% in households' deposits with banking and development financial institutions over the last five years.

The household sector exhibited sustained financial capacity and adaptability to adjust to greater employment pressures under a more challenging economic environment, supported by a healthy balance sheet as well as stable indebtedness and income levels

This was also supported by the temporary blanket guarantee protection on bank deposits by the Government, as well as some degree of portfolio rebalancing given the poor performance on equity investments. Meanwhile, the bulk of household indebtedness continued to be utilised mainly for asset accumulation, with housing loan and motor vehicle financing accounting for over 75% of household loans as at end-2008 (Charts 1.28 & 1.29). The growth in

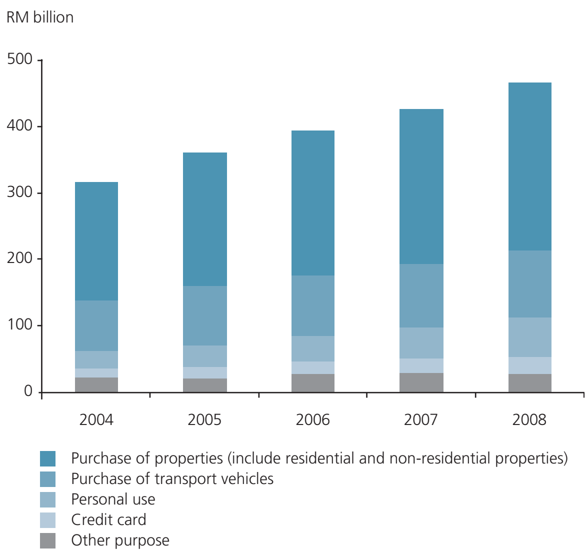
Chart 1.28
Composition of Household Financial Assets



Source: Employees Provident Fund, Securities Commission Malaysia and internal estimates

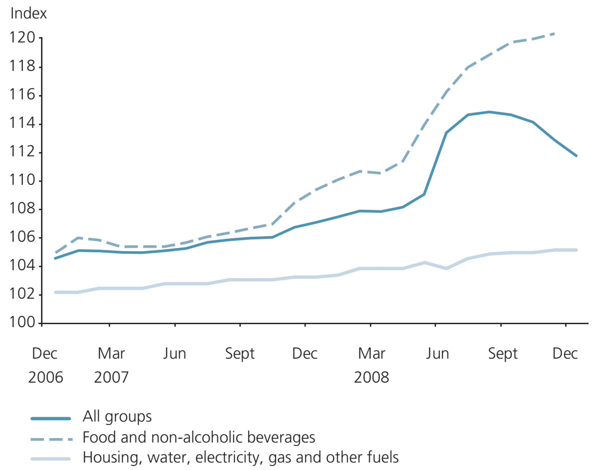
disposable income in 2008 was affected by the higher cost of living, which increased significantly beginning mid-year following the revision in fuel prices and electricity tariff. This had resulted in the consequential rise in the prices of food and essential items, which was exacerbated by higher prices of raw materials (Chart 1.30). Although inflationary pressures abated in the final quarter of 2008 following the sharp moderation in global conditions, the weakening economic and business outlook posed further downside risks to the household sector in the form of deteriorating labour market and employment outlook (Chart 1.31). Demand for credit is expected to moderate further in 2009.

Chart 1.29
Composition of Household Debt by Purpose



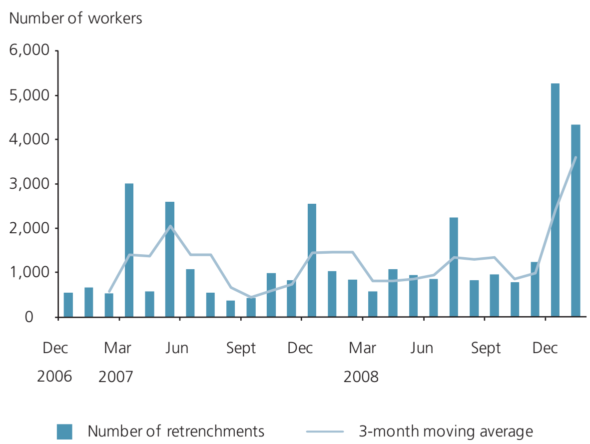
Source: Treasury Housing Loans Division and Bank Negara Malaysia

Chart 1.30
Consumer Price Index



Source: Department of Statistics Malaysia

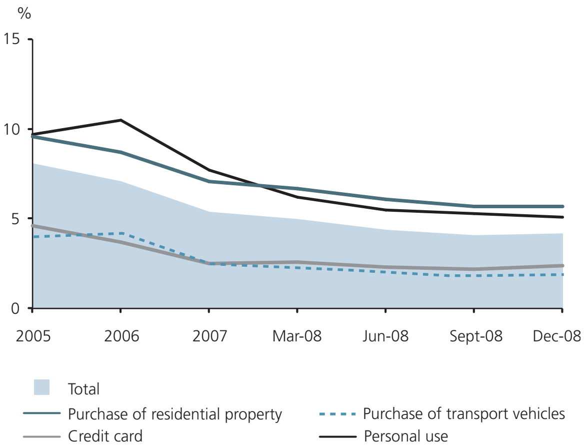
Chart 1.31
Number of Retrenchments



Note: Excludes 7,564 retrenched workers from a company that was taken over in the second half of the year, and rehired immediately by the new owner

Source: Ministry of Human Resources

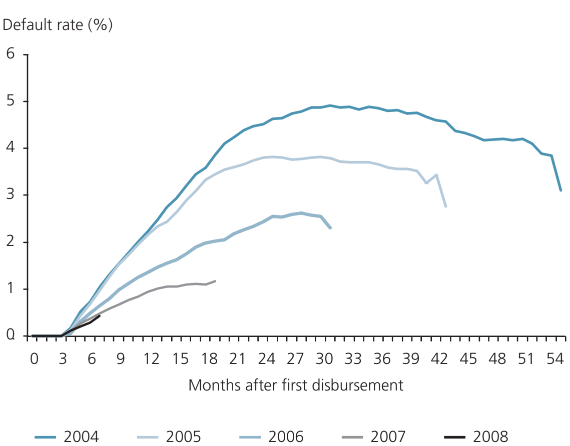
Chart 1.32
Banking System: NPL Ratio of Household Sector



The level of household NPLs and loans-in-arrears continued its downward trend until September 2008, but started to reverse in the final quarter as the impact of increased cost of living and subsequently deteriorating labour market started to set in (Chart 1.32). As at end-2008, household NPLs amounted to RM16.2 billion or 4.2% of total household loans, whilst loan-in-arrears more than two to less than three months accounted for 5.2% of household loans.

After experiencing several years of strong growth in income and steady increase in household wealth, households notably have higher capacity to borrow but at the same time, are more vigilant in incurring higher debts. The financial sector has also strengthened its credit risk management skills and infrastructure. This is reflected in the higher quality of housing loans granted in recent years as compared to earlier vintages (Chart 1.33).

Chart 1.33
Housing Loans: Default Rate by Vintage



Source: Internal calculation, based on survey of financial institutions

Households' debt servicing capacity going forward will be further cushioned by the measures instituted by the Government to boost households' disposable income and ease cash flow positions. These include the three-percentage point reduction in employees' statutory contribution to the Employees Provident Fund, effective for two years from January 2009, employee re-skilling and redeployment programmes for retrenched workers and new employment opportunities, both in private and public sectors. The reduction in banking institutions' base lending rates following the reduction in the OPR as well as the restructuring of debts would further ease pressures on households' cash flow and financial burden. Borrowers facing financial difficulties can also avail themselves to the services of the Credit Counselling and Debt Management Agency (AKPK). Since its inception, there has been growing awareness among the banking public of the importance of maintaining financial discipline to avoid being overly indebted as well as the banks' readiness to restructure loans. During the year, the number of financial counselling and debt management programme handled by AKPK has increased from 17,706 and 7,614 cases respectively in 2007 to 29,489 and 11,958 cases respectively in 2008. Given the experience and the relationship built with financial institutions since its establishment, AKPK is well-positioned to handle an increased demand for debt counselling and restructuring should the economic environment deteriorate further.

FINANCIAL SECTOR RISK ASSESSMENT

Financial system stability remained intact against the backdrop of an increasingly challenging external and domestic environment

The Malaysian financial sector continues to exhibit high degree of resilience and strength and remains well-positioned to weather the effects of heightened external vulnerabilities on the domestic economy. Loan delinquencies continued to improve to record lows and financial institutions remained profitable. Capitalisation and solvency positions were sustained at strong levels with sufficiently high level of financial buffers, strengthened institutional structure and supporting infrastructure, and enhanced governance and risk management practices. Concerns over funding liquidity were almost non-existent given the continuing ample liquidity in the system. Financial markets remained orderly and the intermediation activity by the banking sector continued to function smoothly to the advantage of the economy.

The key risks to financial system stability domestically emanated from the bout of rising inflationary pressures in the first half of 2008, which shifted into concerns over significantly lower growth due to the rapid deterioration in global economic and financial conditions towards the latter half of the year. The Malaysian financial institutions faced profit pressures as capital market activities remained subdued and demand for financing and financial products and services began to moderate in the final quarter of the year. Notwithstanding these challenging conditions, the Malaysian financial sector fared very well and demonstrated strong capacity to withstand the heightened level of downside risks to the operating environment and financial stability.

The level of capitalisation of the banking system remained high whilst the solvency position of the insurance and takaful industry was sustained during the year. The risk-weighted capital ratio (RWCR) and core capital ratio of the banking system were at 12.7% and 10.6% respectively. The excess capital position was at RM38.8 billion. This compares favourably against the total losses recorded by the banking system of RM5.7 billion in 1998 when gross domestic product (GDP) contracted by 7.4%. The implementation of the standardised approach of the Basel II effective 1 January 2008 had limited impact on the existing level of capitalisation, as capital savings from lower risk-weights on retail loan portfolios were mostly offset by new capital charges required for operational risk. Business expansions, both domestically and regionally, remained on track for the year. By end-2008, all domestic banking groups have established an Islamic banking subsidiary and investment bank, whilst three locally-incorporated foreign commercial banks (LIFBs) have also set up independent Islamic banking operations. The surge in investment in subsidiaries of RM16.8 billion (+182.6%) was supported by higher total capital, which grew by RM26.3 billion (+22.9%).

Emphasis continued to be placed on maintaining a strong level of high quality capital to act as a solid buffer during difficult times. Almost 72% of total capital was in the form of Tier-1 capital (2007: 70.8%), of which only approximately 6% was hybrid Tier-1 instruments. This was complemented by the manageable leverage position of the banking system, which was at 11.8 times, similarly for the investment banks, which was at 6.9 times on aggregate. Meanwhile, the overall solvency position of the insurance sector strengthened to RM16.6 billion (2007: RM11.7 billion) and the capital adequacy ratio strengthened significantly to 187.6% (2007: 158.4%), well above the minimum requirement of 100%.

The banking sector remained largely supportive of the financing requirements of the economy amidst the ample liquidity environment and sustained high capitalisation level. Intensified competition in the financing market has also driven the banking institutions to undertake continued but prudent innovation and adopt more customer-centric approaches to cater to the needs of borrowers. This is reinforced by enhanced credit assessment processes and risk management standards, including the use of retail loan vintage, delinquency flow rate and portfolio segmentation analyses, as well as strong governance and internal controls. Nevertheless, the increased uncertainties and less bullish economic outlook have resulted in both borrowers and financiers alike exercising greater caution. The growth in total applications for new financing declined to 9.6% (2007: 45.4%), due to lower applications from businesses, which could be scaling back or delaying large-scale investment and expansion plans in responding to the weaker outlook. As a result, total approvals granted for new financing moderated slightly to RM291.8 billion during the year, although disbursements continued to grow at 15.5% to RM639.9 billion. On aggregate, banking institutions remained forthcoming and accommodative towards their borrowers with financing approval rates remaining stable at approximately 70% (Chart 1.34). Meanwhile, there is ample available financing that can be drawn down by borrowers to meet their needs, as total undrawn loans grew 14% to RM265.6 billion during the year.

As at end-2008, outstanding loans and financing expanded by 12.8% to RM726.5 billion or 98.1% of GDP. The financing portfolio continued

Chart 1.34
Banking System: Loan Approval Rates

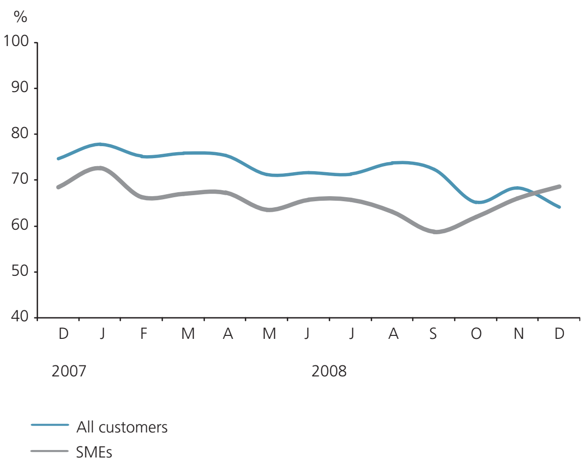
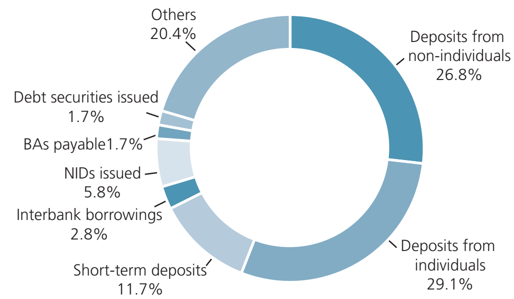


Chart 1.35
Banking System: Key Sources of Funding



to be concentrated in the retail-based sectors, with that of households and SMEs expanding by 9.1% and 9.4% respectively, to account for 53.4% and 17.2% of outstanding financing respectively. Financing to large businesses accounted for 23.5% (2007: 22.8%) of total financing, partly attributed to the less favourable financing conditions in the debt capital markets. Nonetheless, PDS remained a key source of financing for large businesses, particularly for long-term funding, accounting for 57.8% of total outstanding PDS and bank financing to corporations. Meanwhile, total deposits mobilised by the banking sector grew strongly by 11.9% to reach RM973.4 billion or 131.4% of GDP. Consequently, the loan-to-deposit ratio of the banking system remained manageable at 73.5% as at end-2008.

Outflow of portfolio funds due to the global deleveraging process had limited impact on the liquidity conditions in the financial system

Ringgit liquidity in the Malaysian financial system remained ample despite the outflow of portfolio funds due mainly to the deleveraging process by international financial institutions. This reflects the predominantly deposit-based funding structure of the banks, including investment banks. Deposits accounted for approximately 70% of total funding (Chart 1.35), whilst that of the investment banks was at approximately 60%. Investment banks are permitted to accept deposits with minimum size of RM500,000. The overall liquidity buffer of the banking system improved to 16.6% of total deposits (Chart 1.36) whilst the projected surplus as at end-2008 was comfortable at RM116.8 billion for the maturity bucket of up to one week and RM138.5 billion for the maturity bucket of up to one month on account of further increase in deposit placements (Table 1.3). Developments and issues relating to liquidity risk management are discussed in detail in the box article "Liquidity Risk Supervision and Challenges in Liquidity Risk Management".

The overnight and one-week domestic money market rates remained stable at between 3.24% and 3.54% per annum, with no banking institutions experiencing difficulty in sourcing funds. In fact, all banking institutions remained

Chart 1.36
Banking System: Liquidity Buffer

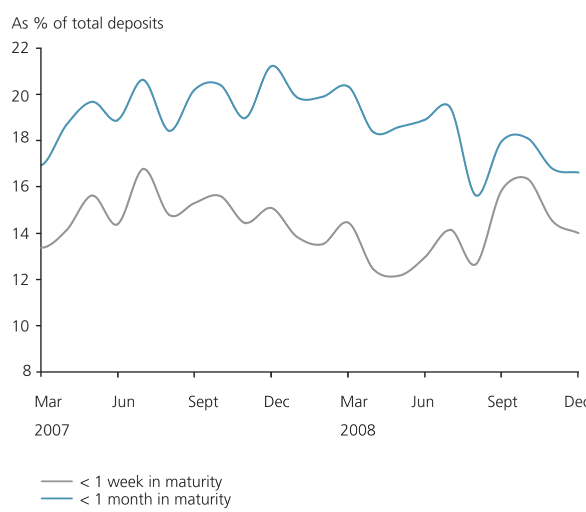


Table 1.2
Key Financial Soundness Indicators

	As at end				
	2004	2005	2006	2007	2008*p*
	% (or otherwise stated)				
Banking System					
Risk-Weighted Capital Ratio	14.4	13.7	13.5	13.2	12.7
Core Capital Ratio	11.4	10.7	10.7	10.2	10.6
Return on Assets	1.4	1.4	1.3	1.5	1.5
Return on Equity	16.3	16.8	16.2	19.7	18.5
Liquid Assets to Total Assets	8.2	8.0	8.0	9.4	10.2
Liquid Assets to Short-term Liabilities	10.6	10.2	10.3	11.9	12.9
Net Non-performing Loans Ratio - 3 months	7.5	5.8	4.8	3.2	2.2
Duration Weighted Net Position to Capital Base	5.0	8.3	7.5	4.4	4.4
Net Open Positions in FX to Capital Base	3.9	1.1	4.7	4.9	4.6
Net Open Positions in Equities to Capital Base	2.3	2.1	2.6	2.5	0.9
Insurance Companies					
Solvency Surplus (RM million)	7,358.3	7,957.1	9,087.4	11,722.9	16,566.7
Solvency Margin Ratio	235.6	235.4	250.1	279.0	296.2
Capital Adequacy Ratio	n.a.	n.a.	139.6	158.4	187.6
Life Insurance & Family Takaful					
Excess of Income over Outgo (RM million)	11,425.1	10,566.1	12,465.9	15,177.8	8,979.8
New Business Premiums / Contributions (RM million)	7,264.9	7,426.9	8,428.3	9,075.6	9,214.9
Solvency Margin Ratio (conventional only)	263.8	260.6	282.8	319.9	307.0
General Insurance & General Takaful					
Underwriting Profit (RM million)	532.2	1,105.0	479.3	-78.3	153.9
Operating Profit (RM million)	1,276.2	1,705.3	1,485.4	1,296.1	719.9
Gross Direct Premiums / Contributions (RM million)	9,186.2	10,085.0	10,505.0	11,009.9	11,421.6
Claims Ratio	61.1	54.9	60.8	66.3	64.9
Solvency Margin Ratio (conventional only)	193.7	195.3	198.6	205.7	268.2
Household (HH) Sector					
HH Financial Assets to HH Debt Ratio	250.0	237.3	248.3	271.5	237.9
HH Debt to GDP Ratio	66.7	69.1	68.6	66.5	63.1
HH Liquid Financial Assets to Total HH Debt Ratio	152.4	142.8	152.2	173.4	140.0
Debt Service Ratio	38.4	41.3	39.2	41.1	39.5
NPL Ratio of Household Sector	8.5	8.1	7.1	5.4	4.2
Corporate Sector					
Return on Assets	5.5	5.3	5.6	6.5	5.6
Return on Equity	9.6	8.7	10.1	12.3	9.6
Debt-to-Equity Ratio	35.6	43.0	40.8	40.0	39.7
Interest Coverage Ratio (times)	6.8	6.6	5.7	6.6	7.2
Operating Margin	13.8	10.9	11.1	12.1	10.7
NPL Ratio of Business Sector	13.8	11.2	10.2	8.0	6.0
Development Financial Institutions[1]					
Lending to Targeted Sectors (% growth)	19.2	29.6	17.5	18.7	16.0
Deposits Mobilised (% growth)	22.4	12.4	11.1	12.4	18.5
Non-performing Loans Ratio - 6 months	13.2	10.4	10.0	8.8	6.7
Return on Assets	1.3	3.0	1.5	1.9	3.2

[1] Refers to development financial institutions regulated under the Development Financial Institutions Act 2002
p Preliminary
n.a. Not applicable

Table 1.3
Banking System: Liquidity Projection as at 31 December 2008

	Cumulative mismatch (RM billion)		Buffer as % of total deposits	
	≤1 week[1]	≤1 month	≤1 week[1]	≤1 month
Commercial banks	90.9	111.2	13.3	16.3
Islamic banks	15.4	17.3	12.5	14.0
Investment banks	10.6	10.0	38.4	36.4
Banking system	116.8	138.5	14.0	16.6

[1] ≤3 days bucket for investment banks
Note: Numbers may not necessarily add up due to rounding

as net interbank lenders to Bank Negara Malaysia for most parts of the year with total net placements of RM162.5 billion at end-2008. While the securitisation market is beginning to gain importance as an alternative funding avenue for banking institutions, the prolonged ample liquidity environment has kept such activities largely on the sideline. The amount of banking system loans securitised through Cagamas Berhad, the national mortgage corporation, was at RM12 billion as at end-2008. During the year, Bank Negara Malaysia also acted pre-emptively to ensure adequate supply of liquidity to the entire financial system by extending the access to its ringgit liquidity facility to all insurance companies and takaful operators.

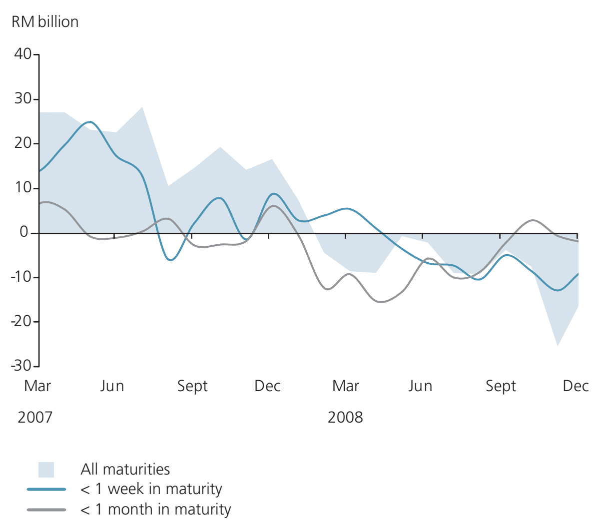
Whilst ringgit liquidity was not a concern, the domestic financial system was not insulated from the global tightening in US dollar liquidity. This has prompted the Malaysian banking institutions to actively manage the foreign currency-denominated balance sheets and to swiftly adjust the US dollar-denominated exposures to narrow the negative US dollar liquidity mismatch, comprising mainly of direct lending and foreign currency swaps. This resulted in a narrowing of the banking system's US dollar short position to a manageable level from its peak in November 2008 (Chart 1.37). Bank Negara Malaysia has also committed to provide adequate US dollar liquidity, particularly to facilitate trade-related transactions in support of the export-import sector. The existence of bilateral and multilateral currency swaps with the regional countries, including the recently concluded bilateral currency swap arrangement with the People's Bank of China, are expected to add to further confidence on the availability of liquidity in the domestic market, in particular for international trade and investment activities.

Profitability under greater challenge

The conventional and Islamic banking systems recorded an 8.3% growth in combined unaudited profit before tax (PBT) to RM19.2 billion in 2008, resulting in a return on average equity of 18.5%. This performance was moderated by the persistent volatility and uncertainties in the global and domestic financial markets that resulted in a decline of 27.5% in revenue from treasury-related and investment activities.

The more subdued business conditions, highly competitive financing market and ample liquidity environment posed considerable pressure on financing margins, as well as fee-based income of banking institutions. Net interest income grew at a slower pace of 8% (2007: 10.8%), attributed to the slight moderation in the volume of financing and higher expenses paid on the larger

Chart 1.37
Banking System: US Dollar Liquidity Mismatch



Liquidity Risk Supervision and Challenges in Liquidity Risk Management

The experiences of banks in several advanced economies in confronting liquidity stress during the current financial market turmoil have revealed the increasingly complex nature of liquidity risk, while also underscoring the importance of managing liquidity risk effectively. Liquidity risk – defined as the failure of a financial institution to meet expected and unexpected cash flow needs as they arise – is inherent in the financial intermediation function assumed by banking institutions and is a central component of the prudential regulation and supervisory framework. The sound management of liquidity risk is critical both to avert a threat to the solvency of a banking institution, as well as a loss of confidence in the broader financial system which can amplify the systemic nature of liquidity risk.

Implementation of the Liquidity Framework and supervisory assessments of liquidity risk
Banking institutions in Malaysia are required to comply with the Liquidity Framework, introduced by the Bank in 1998, in the assessment of their liquidity positions. The Framework sets out a standard measurement approach that focuses on the ability of a banking institution to manage its liquidity mismatches through the projection of a maturity profile of its assets, liabilities and off-balance sheet commitments over a one-year horizon. The maturity profile reflects the behavioural characteristics of cash flows, and not necessarily their contractual maturities. Based on these projections, banking institutions are expected to maintain adequate liquidity buffers composed primarily of high quality marketable securities to cushion the impact of liquidity shocks transpiring either from institution-specific events (e.g. a "name crisis"), or market-wide stress scenarios (e.g. closure of an important funding market). The Framework also requires banking institutions to identify and monitor, through defined ratios, concentrations of funding sources in large deposits and wholesale or offshore funding markets.

Compliance with the Liquidity Framework has contributed towards ensuring adequate liquidity buffers at the institutional level, in line with the nature and complexity of a banking institution's activities. It has additionally spurred improvements in the day-to-day liquidity risk management practices of banking institutions. Notably, the requirement for banking institutions to hold liquefiable assets as a proportion of liabilities while taking into account the shape of their actual funding profiles has resulted in enhancements to banking institutions' infrastructure and systems to support forward projections of cash flows. Banking institutions have correspondingly developed more detailed and structured approaches to monitoring liquidity risk, for example by enhancing internal risk reports to capture more detailed information on flows arising from treasury activities and foreign operations, thereby supporting a more rigorous assessment of sources and drivers of funding liquidity risk. The Framework has also encouraged the institutionalisation of liquidity risk governance structures, with responsibility for the review of liquidity positions formally assigned to the asset-liability management committees, or ALCOs. The constitution of ALCOs comprising members drawn from both business units and control functions has also resulted in the closer integration of the liquidity risk management process with the business activities of banking institutions, thus promoting more effective enterprise-wide risk management approaches.

The Liquidity Framework is reinforced through ongoing supervisory reviews of individual institutions' liquidity positions and risk management practices. More recently, heightened supervisory attention has been directed towards liquidity stress testing to determine how funding requirements are likely to evolve under both normal and abnormal adverse conditions. A survey conducted by the Bank in early-2009 on stress testing practices of several banking institutions indicates that the level of sophistication of liquidity stress tests performed by banking institutions varied markedly, with methodologies of stress testing for liquidity risk generally at a less developed stage than for credit risk and market risk. A key challenge noted was the difficulties faced by banking institutions in assessing the impact of synchronised market behaviours on their respective liquidity positions. Banking institutions have responded by adopting a more inclusive approach in the development of stress scenarios, with the broader involvement and interaction of personnel from business units, risk management functions and senior management in providing sound expert judgment in the stress testing exercise where data limitations have impeded the modelling of extreme liquidity events.

Supervisory reviews have also been conducted to assess the robustness of banking institutions' contingency funding plans, including arrangements for their effective implementation, to deal with liquidity stress scenarios. Greater attention has also been focused on the second round and reputational effects related to the execution of contingency funding measures. These assessments overlay a continuing process of engagement between the Bank and banking institutions to develop contingency funding plans that appropriately reflect possible behaviours of funding flows under a variety of stress scenarios, including those associated with abnormal conditions.

Trends and continuing challenges in liquidity risk management

Extreme liquidity pressures experienced during the turmoil in global financial markets have raised new challenges for banking institutions. Some of the specific challenges being addressed include:

Centralisation of funding and liquidity risk management

Treasury functions of banking institutions operating within financial groups are increasingly being centralised to facilitate the more efficient management of group funding sources and external funding relationships. Such arrangements, however, increase the prospect of group-wide liquidity difficulties when one or more individual banking institutions serving as key funding providers for the group as a whole are affected by liquidity stress. This difficulty is often further magnified through the effects of reputational contagion which curtail external funding support. Bank Negara Malaysia has therefore increased its emphasis on the effective monitoring of material intra-group liquidity risks, and requires banking institutions to preserve the granular monitoring of risk positions at the entity-level, in addition to the monitoring of group-level liquidity risk positions. Operational, regulatory, legal and Shariah constraints that may potentially hinder intra-group liquidity support facilities, especially under stress conditions, are also covered in the Bank's supervisory assessments of the effectiveness of centralised liquidity functions.

Foreign currency liquidity risk

Dealings by Malaysian banking institutions in multiple currencies introduce an additional layer of complexity in the management of liquidity risk. While still currently at a modest level, this is expected to increase in tandem with the growing demand for foreign currency financing to support the growth of cross-border investments and trades in goods and services, as well as the greater participation in global financial markets by banking institutions.

A large number of Malaysian banking institutions currently assume full convertibility between currencies, particularly in relation to the ability of ringgit liquidity surpluses to meet foreign currency liquidity shortfalls. This has not posed material concerns for banking institutions in Malaysia to date, with foreign-currency denominated assets forming 6.6% of total assets held domestically, of which approximately 75.5% are US dollar-denominated. However, the expansion of banking institutions' foreign currency activities will potentially increase their exposure to liquidity mismatches associated with sudden changes in the liquidity of foreign exchange markets. This is particularly important for

Malaysia where – pending the further deepening of its foreign exchange market with a sufficiently liquid ringgit swap market – ringgit liquidity surpluses may not adequately cover foreign currency liquidity deficits, particularly under stressed conditions. Adjustments to the Liquidity Framework for banking institutions are therefore being proposed to better anticipate and mitigate the risk of an overestimation of liquidity buffers when efficient access to foreign exchange markets is temporarily affected by adverse market conditions.

Islamic finance

The lack of empirical evidence to support behavioural assumptions has posed a challenge for Islamic banks to accurately estimate the extent to which the unique contract features of Islamic financial transactions may affect their liquidity risk profiles. For example, the use of *mudharabah* contracts, where principal amounts are not guaranteed and returns are dependent on the performance of underlying assets, should, in principle, reduce the funding liquidity risks faced by Islamic banks. However, in practice, Islamic banks face considerable competitive pressure on the profit rates of the *mudharabah* accounts that are being offered. The dominance of trade-based financing contracts involving assets being held in the form of fixed and illiquid assets or inventories, such as through *murabahah, ijarah,* or *istisna'* contracts, also potentially reduce balance sheet liquidity.

These challenges are being addressed through ongoing initiatives to better understand the behavioural characteristics of cash flows for different Shariah contracts and their impact on balance sheet liquidity, towards supporting the more effective identification, measurement and management of liquidity risk. The development of a wide range of funding options in the Malaysian Islamic Interbank Money Market has also been instrumental in supporting the liquidity needs of Islamic banking institutions. These include interbank placements based on *mudharabah*-type contracts, sell-and-buy-back agreements as alternatives to repurchase agreements, and Islamic derivatives such as Islamic rate swaps and Islamic FX forwards. Total outstanding instruments increased from RM55.2 billion in 2001 to RM211.0 billion in 2008, while turnover of securities traded on the Islamic Interbank Money Market increased from RM39.7 billion in 2001 to RM185.2 billion in 2008. The growing acceptance of Islamic finance as well as the emergence of more Islamic institutional investors such as takaful operators and Islamic fund managers in recent years have also widened sources for Islamic funding, thus facilitating the diversification of funding strategies for Islamic banks.

Future enhancements

Enhancements to the regulatory framework will be undertaken to promote further improvements in liquidity risk management practices within banking institutions. This will include a review of the Liquidity Framework to:

- require banking institutions with large foreign multi-currency operations to manage liquidity risk by currency;
- introduce more detailed qualitative and quantitative standards to be observed by banking institutions for their cash flow projections; and
- allow the use of internal measurement approaches, where it can be demonstrated that they provide a level of resilience equal to or greater than the minimum regulatory requirement.

The enhancements to the Liquidity Framework will also be supplemented by the issuance of qualitative liquidity risk management standards in 2009, incorporating developments in international standards and practices in liquidity risk management and lessons from the current turmoil.

deposit base. The impact of the OPR reduction on interest and financing income is partially offset by the reduction in the minimum deposit rates offered on retail and SME placements of fixed deposits with banking institutions (Chart 1.38). Coupled with intensified competition in the financing market, particularly to attract and retain the pool of customer base with strong credit standings, gross interest margin narrowed slightly to 2.64 percentage points (2007: 2.70 percentage points). In comparison, banking institutions with a larger fixed-rate financing portfolio were less affected. Fixed-rate financing comprised between 26.6% and 77.5% of the total financing of banking institutions. While the level of displaced commercial risk for Islamic banks has declined as returns on deposits accepted adjusted downwards accordingly, the level of profit equalisation reserves (PER) declined briefly between May and July (Chart 1.39). This was part of the Islamic banks' strategy to preserve competitiveness of returns offered to depositors, as more pronounced valuation losses were recorded during the period which coincided with heightened financial market volatilities both on the global and domestic fronts. Subsequently, the level of PER improved as the Islamic banking system recorded persistent growth in financing income amidst continued portfolio expansion.

Deteriorating conditions in global credit markets and weakened economic outlook had yet to affect the aggregate quality of banking institutions' financing portfolio. Coupled with the generally stable and resilient residential property prices and accumulated financial buffers of both households and businesses in recent years, banking institutions continued to reap the benefits of ongoing enhancements in credit risk management infrastructure and underwriting practices. The downward trend in the level of NPLs was sustained through most parts of the year, with the gross NPL ratios for overall businesses, SMEs and households declining to 6% (RM17.7 billion), 6.8% (RM8.5 billion) and 4.2% (RM16.2 billion) respectively. Given the strengthened financial capacity, and continued profits, banking institutions continued to actively manage their balance sheets and asset quality through more stringent provisioning policies for legacy loans, disposal of NPLs and prudent write-offs of impaired loans during the year. Financing loss coverage ratio rose to 89.3% (2007: 77.3%), whilst loan write-offs remained stable at around RM9 billion. These would help improve the capacity to absorb future losses and mitigate the pro-cyclical impact on future profits. Collectively, these measures resulted in a significant decline of 21% in the level of net NPLs to RM15.8 billion, or 2.2% of total net loans as at end-2008 (2007: 3.2%). Inclusive of write-offs during the year, gross NPLs still recorded a substantial decline of 14.3%. This improved the higher net interest margin to 0.47 percentage points which was above the past three-year average of about 0.4 percentage points (Chart 1.40). Nevertheless, the more challenging conditions in the final quarter of 2008 has resulted in a slight uptick in household NPLs for the purchase of residential properties and cars as well as credit cards, where overall household NPL ratio increased marginally by 0.1 percentage points to 4.2% (Chart 1.41). Similarly, loans-in-arrears increased slightly by 2% in the two to three months bucket, to account for 1.3% of total gross loans (2007: 1.5%).

Revenue from fee- and commission-based activities grew by 7.1% to RM7.4 billion (Chart 1.42). This was largely attributable to financing-related services, including financing processing and arranging, commitment and guarantee lines, remittance services and cross-selling activities. Nevertheless, unfavourable conditions in the capital markets and the more difficult environment for businesses have affected the demand for related financial services, such as financing syndications, underwriting, corporate advisory and brokerage services, thus posing greater downside pressure on the revenue base of investment banks. The more challenging global and regional conditions also posed increasing challenges on the profitability of overseas investments of Malaysian banking institutions. While these only constituted a small proportion of overall operations (less than 11% of total group PBT), a few domestic banking groups have larger operations in regional economies, amongst others, Singapore, Indonesia, Cambodia and Hong Kong. The overhead expenses relating to new establishments grew by 7.6% while staff-related expenditures increased by 9.2% during the year. These contributed to a higher total cost-to-income ratio of 46.4% (2007: 43.9%) and staff cost per employee of RM81,341 (2007: RM78,049). Nonetheless, the productivity level improved as measured by the PBT generated per employee of RM170,779 (2007: RM168,545).

Chart 1.38
Movements in Interbank Rate, Average Lending Rate and Average Cost of Funds

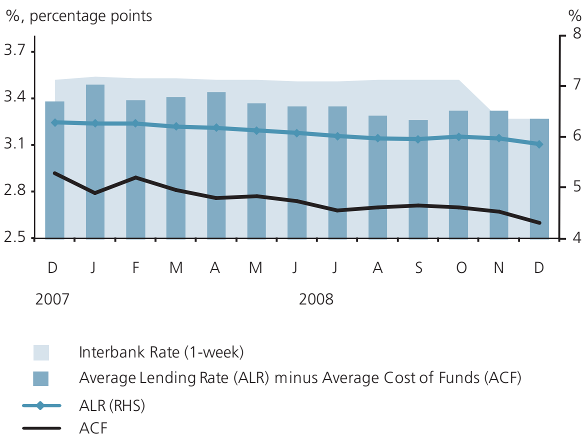
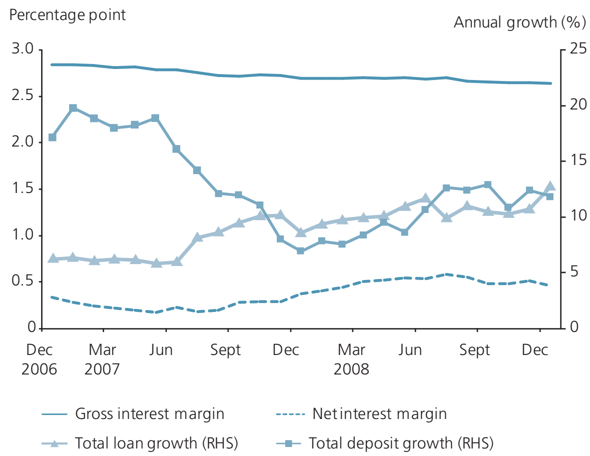


Chart 1.40
Banking System: Movement in Gross and Net Interest Margins



Similarly, the insurance and takaful sector faced challenges in maintaining the growth in premiums and contributions from new businesses amidst strong competition in the industry. Total net premium and contribution income grew by 2.4%, attributed mainly to the expansion in takaful business. The persistent financial market volatility in 2008 and concerns over the economic conditions towards the end of the year saw the shift in demand towards the traditional protection policies. New investment-linked (IL) business of the life insurers contracted by 28.6% whilst ordinary life insurance and family takaful products recorded a growth of 22.4%. Consequently, total new premiums for the life insurance and family takaful segment grew only modestly by 1% to RM9.2 billion during the year. Excess of income over outgo was lower totalling RM9 billion, attributed mainly to the net unrealised losses on the IL business and higher net policy benefits.

Demand for general insurance and takaful coverage on motor and marine, aviation and transportation-related businesses moderated in tandem with

Chart 1.39
Banking System: Movement in PER and Average Quoted FD Rates

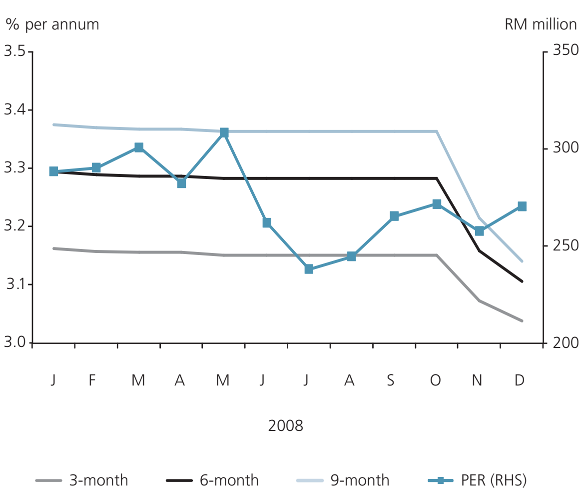


Chart 1.41
Banking System: Non-Performing Loans (NPL) Level and Ratio

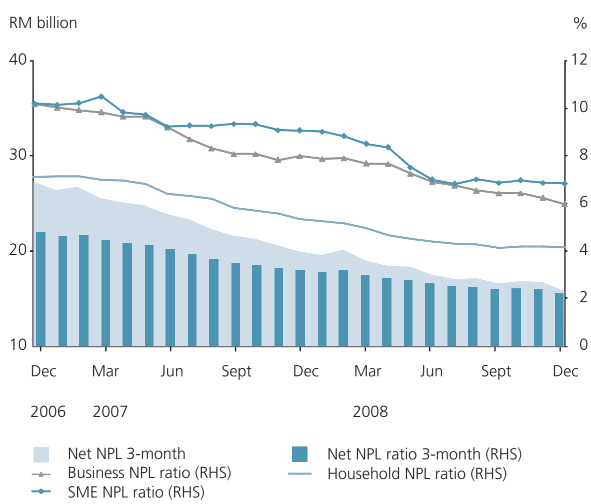
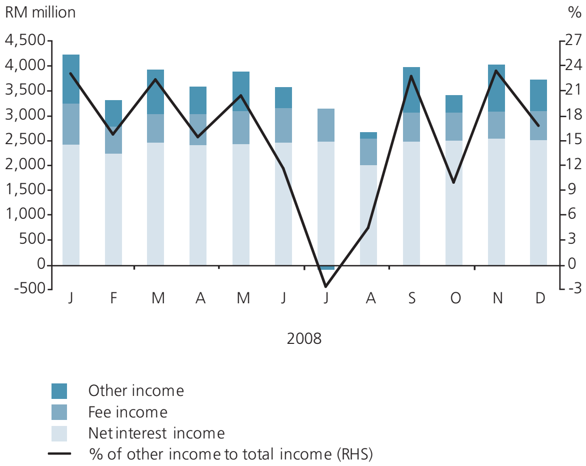
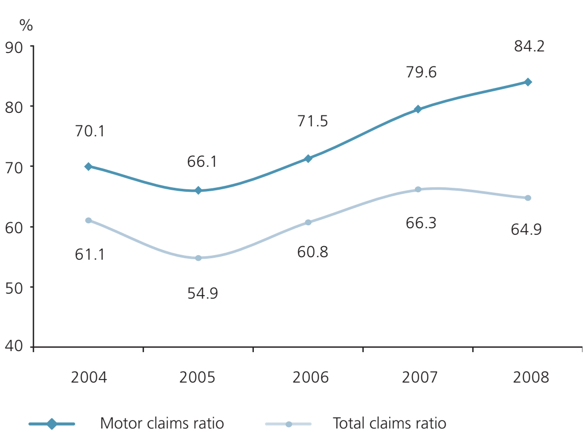


Chart 1.42
Banking System: Composition of Income



the slower trade activities and a more subdued automotive demand outlook. Driven mainly by the expansion in the fire segment, the gross direct premium and contribution for the general insurance and takaful business registered an increase of 5.5% to RM11.5 billion. Total operating profit, however, declined by 44.5% to RM0.7 billion. In addition to unrealised losses, the profit performance was also affected by higher net claims incurred. This arose mainly from motor claims reflecting the rising incidence of motor thefts, higher part prices and higher court awards which resulted in a higher claims ratio of 84.2% (2007: 79.6%) (Chart 1.43).

Chart 1.43
General Insurance and Takaful Businesses: Claims Ratios

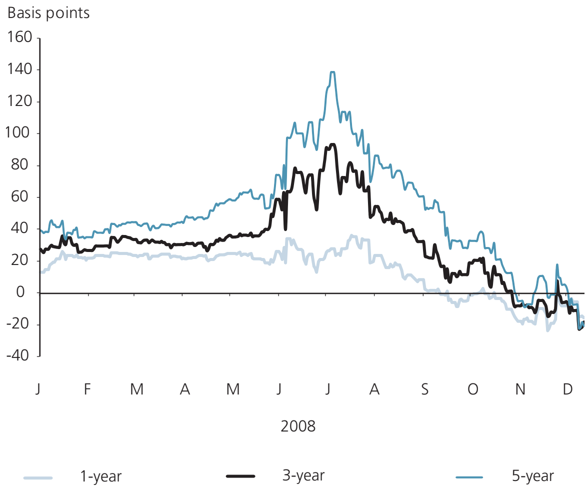


Volatility and uncertainties in financial markets posed greater challenges in managing market risk exposures

Net trading and investment gains of the banking system contracted on account of higher valuation losses on trading portfolio and investment losses particularly in the third quarter of 2008. These were partly mitigated by active usage of hedging instruments to manage the overall market risk exposures in anticipation of greater volatility in bond yields, equity prices and currency exchange rate movements. As a result, net trading and investment gains continued to be recorded albeit lower, amounting to RM4.2 billion or 9.6% of total income (2007: 14%). Nonetheless, investment banks and Islamic banks which typically hold a relatively larger proportion of securities in their portfolios, recorded higher net trading losses. While the overall impact on Islamic banks were more than offset by continued growth in the volume of core financing, the resultant impact on investment banks' profits was more significant causing PBT to decline by 66.7% during the year. A few smaller investment banks which concentrate on stockbroking activities recorded losses as efforts to diversify their income sources continue to take place. In responding to the exceptional circumstances in the global financial markets and potential difficulties in asset valuation, flexibility was accorded to banking institutions to reclassify non-derivative securities out of the held-for-trading category, subject to strict parameters and disclosure requirements in line with changes made in FRS 139.

During the year, trading portfolios of banking institutions have also been gradually downsized in tandem with the less favourable financial market conditions. Securities held by the banking system for trading purposes declined slightly by 2.8% to account for 3.9% of total assets. Similarly, banking institutions' exposures to equity risk improved as holdings of shares for proprietary trading declined by 68.7% in 2008. This ultimately translated into lower capital charges for equity risk amounting to only 0.2% of capital base (2007: 0.3%). The higher risk aversion was also reflected in the higher composition of government securities in the dealing portfolios which doubled to 21.4% (2007: 10.8%). Similar shift was also observed in the longer-term investment strategies, as overall holdings of MGS expanded by RM29 billion (+88.9%) to account for 4.6% of total banking system assets. Despite the higher volatility in the

Chart 1.44
Spreads between Interest Rate Swap and MGS



Source: Bloomberg

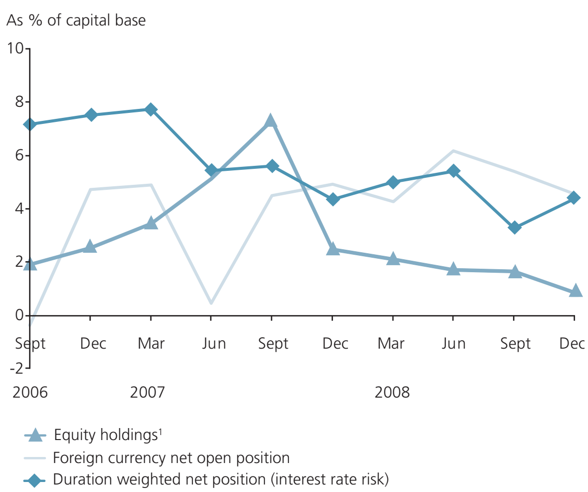
activities, had also increased due to the divergence in yield movements between MGS and interest rate swaps (Chart 1.44).

During the year, exposures to foreign exchange risk moderated as banking institutions adjusted to the more volatile currency movements, with the corresponding net open position accounting for 4.6% of capital base (2007: 4.9%) (Chart 1.45). In terms of capital charge, foreign currency-denominated exposures accounted for only 0.8% of capital base (2007: 0.8%). Banking institutions' open positions against non-US dollar and regional currencies remained relatively small, while active management amidst a strengthening US dollar was undertaken as the global deleveraging process continued.

Given the large holdings of equities and bonds by the insurance and takaful industry (Chart 1.46), management of market risks has become increasingly demanding during the year. The life insurance and family takaful business recorded total unrealised losses of RM2.6 billion, particularly for the IL products. Unfavourable conditions in the domestic equity market saw a reduction in the market value of total equity holdings by 43.5% to RM13.8 billion as at end-2008. This also reflected the shift towards safer investment assets whereby holdings of MGS and corporate bonds rose by 9.2% and 6.7% respectively. Meanwhile, holdings of equities in the properties

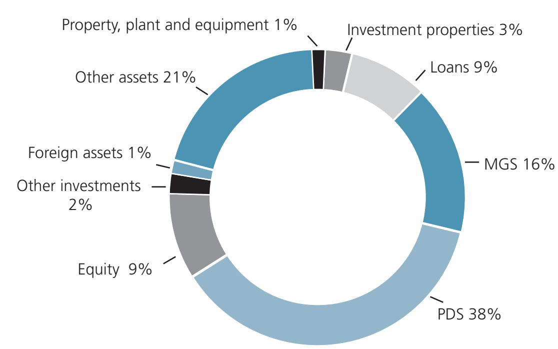
domestic bond market and increased holdings of fixed income securities, interest rate risk exposures remained stable at 4.4% of capital base, given the greater use of derivatives to manage interest rate risks. The outstanding notional amount of these contracts increased by 11.3% during the year to RM764.5 billion. Basis risk which emanates from the movements in yields and affects the effectiveness of hedging

Chart 1.45
Banking System: Market Risk Exposures



[1] Amount of investment in quoted shares

Chart 1.46
Composition of Insurance and Takaful Industry Assets



and technology sectors declined the most by 91.6% and 65.5% respectively. The portfolio rebalancing process had resulted in the overall market-to-accreted value ratio for bond holdings to increase to 75.7% (2007: 69.9%), thus easing the liability mismatch positions.

Manageable counterparty risks amidst persistent uncertainties in the global financial system

The Malaysian financial sector has minimal direct and indirect exposures to securities and entities affected by the global financial turmoil. Unlike previously where concerns over counterparty risks were concentrated on the domestic banks, such risks were focused on the LIFBs following the mounting solvency concerns of the affected international financial institutions stemming from intra-group transactions between parent and foreign subsidiaries. This occurred despite the minimal exposures and that the operations in the LIFBs in Malaysia are in the form of subsidiaries. Such concerns, however, occurred only briefly without posing any adverse consequences on the liquidity positions of the LIFBs. The risks were further muted by the swift actions of major central banks in providing guarantees for the debts of the financial institutions to ease concerns over counterparty risks facing them. Overall, the foreign counterparty exposures from on-balance sheet and notional amounts of off-balance sheet assets constituted less than 15% of total assets of the banking system and less than 2% of the insurance and takaful industry. Concerns on counterparty reinsurance risks globally were also high, particularly on the reinsurers' ability to honour liability obligations amidst mounting write-downs on illiquid investments by large international financial institutions. In the Malaysian context, exposures to reinsurance risk as measured by total premiums cessions expanded by 4.2% to RM3.5 billion, to represent 27.8% of total gross premiums. Reinsurance recoveries which are at risk to default by reinsurers, however, declined slightly to account for 9.3% of shareholders' equity (2007: 9.9%). In addition to the consistently high net retention of risk of above 80% and the limited exposures to offshore and foreign reinsurers, these factors contributed to the manageable level of overall counterparty reinsurance risk of the Malaysian insurance and takaful industry.

The Malaysian financial system is expected to remain sound under more challenging operating scenarios

A series of scenario-based tests on credit, market and liquidity risks were conducted at both the system and individual institution levels to provide a forward-looking assessment of the capacity of financial institutions to withstand potentially adverse and significant macro-financial shocks, as well as the resultant implications on earnings and capitalisation. The stress factors were applied consistently across all institutions at the system level to facilitate assessment of systemic shocks.

While the more challenging environment will affect revenue performance and result in higher delinquencies, the banking system is expected to record RWCR above the minimum requirement of 8%. It currently has excess capital exceeding RM30 billion and more capital raising exercises are already in the pipeline. The financial system has the capacity to support the financial needs of the economy, even under a more adverse scenario of economic contraction

In addition, the stress factors were also calibrated to capture institution-specific risk profiles based on supervisory assessment of additional quantitative and qualitative information, such as key risk drivers, business growth strategies, detailed default history and loss rates, quality of assets and capital, as well as strength of risk management and governance standards. Detailed description of the macro-financial scenarios, shock assumptions, stress test methodologies and results were communicated to banking institutions' senior management and risk managers to facilitate meaningful discussions in exploring appropriate risk-mitigation measures and formulation of business and capital management plans.

The stress scenarios were constructed based on the potential magnitude and extent of spillover effects of the intensification of international financial market duress, prolonged slowdown in global and regional growth, persistent volatility in commodities and energy prices as well as expected price levels in the economy. Multiple scenarios based on domestic growth and financial market conditions that are comparable to the historical worst levels were applied. These include the deep recession during the Asian financial crisis in 1997–1998, the flat growth period arising from the dot-com bubble bust and inventory overhang in the semiconductor industry in 2001, and the SARS outbreak in 2003. Using a scenario horizon of one year, shock magnitudes on: (i) credit risk losses arising from the incidences of new NPLs, default on and downgrade of securities held; and (ii) market risk losses arising from lower equity prices and further valuation losses on securities held, were derived. The credit risk stress factors took into account the relationship between growth in GDP and overall NPL and specific loan segments that are closely correlated with economic conditions, as well as default history and rating migration of corporate bonds [data obtained from ``Corporate Malaysia – Default and Ratings Performance (1992–2007)´´, August 2008, RAM Ratings (Malaysia)]. The market risk stress factors were simulated using volatility spikes and steep adjustments in asset prices and bond yields based on adverse historical experiences and potential extreme shocks.

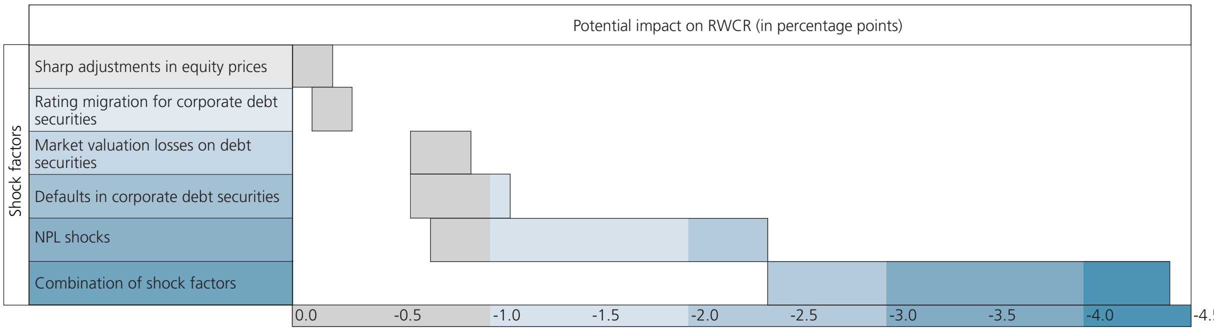
The banking system today is fundamentally stronger compared to the periods prior to the Asian financial crisis more than a decade ago (Table 1.4). It is expected to remain sound with its RWCR remaining above 8% even after absorbing the potential losses that may arise, including under a deeper economic contraction scenario. Overall potential cumulative losses from credit shocks are larger than those from market risk shocks, with an expected maximum decline in the banking system RWCR of about three percentage points based on conservative loan loss provisioning rate that do not take into account the value of underlying collaterals (Chart 1.47). The potential increase in the level of NPLs by percentage points is also consistent with other internal estimates based on regression and loans-in-arrears migration methods without incorporating the positive effects of risk mitigation measures undertaken by banking institutions, including loan restructuring. The increase in delinquencies is expected to be manageable, supported by proactive measures by banking institutions to engage and assist borrowers with increased financial strains through provision of debt counselling and advice and restructuring or rescheduling of loans to ease temporary cash flow problems.

Table 1.4
Financial Position of Financial Sector Pre- and Post-Crisis

Banking System	1996	1997-1998	2008*p*
Number of institutions	89	80-86	54
Average total assets per institution	RM7.1 bil	RM9.6 bil	RM40.4 bil
Risk-weighted capital ratio	10.6%	10.5%	12.7%
Core capital ratio	9.0%	8.9%	10.6%
Return on assets	2.0%	-0.9%	1.5%
Return on equity	27.5%	-12.3%	18.5%
Net NPL ratio	3.0%	13.2%	2.2%
Gross NPL ratio	3.9%	18.7%	4.8%
Insurance Sector	**1996**	**1997**	**2008**
Solvency surplus	n.a.	RM3.7 bil	RM16.6 bil
Total profit	RM4.7 bil	RM2.7 bil	RM9.7 bil

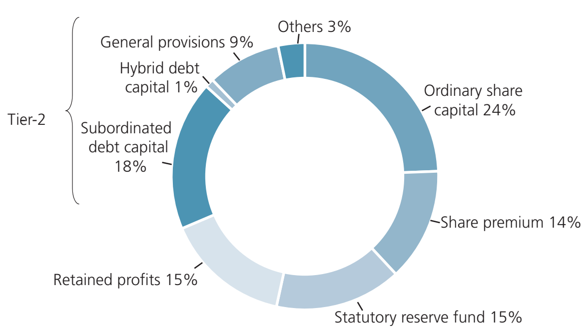
p Preliminary
n.a. Not applicable

Chart 1.47
Potential Impact on RWCR



Although the cumulative effects on profitability are of higher magnitudes, with some institutions potentially recording losses under a deeper economic contraction scenario, the availability of strong capital buffers would enable the banking system to absorb any potential losses. The banking system RWCR would remain above 8% whilst core capital ratio would surpass 6%, before incorporating some of the capital enhancement programmes undertaken or being planned by the banking institutions. Despite the more active capital management activities by banking institutions in recent years and introduction of more innovative Tier-1 capital instruments, approximately 90% of Tier-1 capital comprised ordinary shares, share premium, statutory reserves, general reserves and retained earnings (net of unaudited losses) less goodwill. As a result, the equity to assets ratio of the banking system was at 10% of total risk-weighted assets or 6.8% of total assets (Table 1.5). Even for the investment banks, the equity

Chart 1.48
Banking System: Composition of Capital



to assets ratio remained manageable at a range of 6.9% to 47.7%. This still compares favourably with the benchmark used by the US regulators that deem any Tier-1 capital to total assets ratio of more than 3% to 4% as strong. Arising from the current crisis, there has been greater emphasis on traditional capital (ordinary shares and reserves) to gauge the capital strength of banking institutions. Bank Negara Malaysia will monitor closely international developments in this area.

In line with international best practices to strengthen liquidity risk assessment, the scenario-based tests were also conducted to account for market-wide and institution-specific events. The first simulated event originated from increased risk aversion and counterparty concerns among interbank players, while the latter is assumed to stem from rapid erosion in capital, credit rating downgrades and negative publicity or confidence relating to specific institutions. The resultant impact of different events on the availability of interbank credit lines, realisation of contingent credit lines extended, withdrawals of retail and corporate deposits and potential higher haircuts on the realisable value of liquefiable assets is then imposed on the existing level of liquidity buffer. Overall results revealed that banking institutions generally have adequate buffers to withstand any tightening in interbank credit lines given the low reliance on money market funding. On the other hand, events relating to credit rating downgrade and negative publicity or confidence issues of specific institutions may have greater implications on some banking institutions' deposit base, particularly those

Table 1.5
Capital Adequacy Ratios as at end-2008

	Banking system	Commercial banks		Islamic banks	Investment banks
		Domestic	Foreign		
	%				
RWCR	12.7	11.9	12.2	13.3	32.2
Core capital ratio	10.6	10.1	9.7	11.0	31.3
Equity[1] to asset	6.8	6.7	6.1	6.5	12.6
Equity[1] to RWA	10.0	9.1	9.6	10.8	32.6

[1] Equity comprises ordinary shares, share premium, statutory reserves, general reserves and retained earnings (net of unaudited losses) less goodwill

Table 1.6
Reserve Adequacy for Life and Family Business

	2005	2006	2007	2008*p*
	RM million			
3-year average net premiums	15,365.4	17,111.2	18,766.7	20,148.2
Technical reserves	74,672.8	85,436.5	98,833.7	106,128.4
Ratio of technical reserves / 3-year average net premiums (times)	4.9	5.0	5.3	5.3

p Preliminary

that comprise mainly corporate deposits. These risks, nonetheless, remained low due to the Government blanket deposit guarantee until end-2010.

Similar stress tests were also conducted for the insurance and takaful industry during the year. Given the more fragmented market structure, some individual institutions, particularly in the general business, could be more severely affected in terms of profitability and capitalisation under the more adverse scenarios. Total loss reserves of the general insurance and takaful sector has increased in recent years with the ratio of loss reserves to average claims at 2.5 times (2004: 1.9 times). The proportion of total loss reserves in the longer-tail business (motor `Act´ cover, liability, workmen's compensation and employers' liability), currently at 41.1%, is expected to increase in tandem with the growth in the longer-tail premium. Although the nature of the domestic market is less prone to catastrophic losses, the level of capitalisation of the general business at 1.2 times the total loss reserves may be insufficient to absorb any large fluctuations in reserve inadequacy. As for the life insurance and family takaful business, the reserve level has increased in line with the growth in premiums. As at end-2008, the reserve level was 6.1 times the average three-year premiums (Table 1.6).

OUTLOOK FOR FINANCIAL SYSTEM STABILITY AND FOCUS OF SURVEILLANCE IN 2009

The domestic financial sector is bracing for greater challenges as moderation in economic growth begins to take shape and volatility in the domestic financial markets persists given its strong linkages with the global markets. Sustained risk aversion may result in continued low trading liquidity in specific asset classes, while credit spreads in the corporate bond markets may widen further, hence resulting in higher cost of funding in the capital markets. Furthermore, corporate earnings which have started to decline and weaker employment prospects could potentially translate to broad-based increases in delinquencies and defaults, triggering a credit cycle downturn. While the accumulated financial buffers of the business and household sectors would ease the potential strains on their income stream and debt servicing capacity, some specific segments in the more affected economic sectors and those with lower shock-absorbing capacity have faced some financial difficulties. As credit outlook weakens and demand for financing, financial products and insurance protection moderates, the Malaysian financial institutions will face significant challenges in sustaining their revenue base.

Banking institutions will need to balance judiciously the requirement to safeguard prudent standards in order to minimise future losses due to adverse scenarios and also the need to provide continued support to customers particularly in easing temporary cash flow pressures. Counter-cyclical practices will only exacerbate the economic conditions which will ultimately impact the banks' balance sheets. In recent years, several domestic financial groups have also expanded regionally and entered into strategic alliances with foreign institutions. Under a more challenging environment on the regional front, the domestic financial groups with significant regional operations (accounting for less than 18% of total group PBT), will not only face lower profit contribution from their overseas investments but this phenomenon may entail new channels of risk transmission. Nonetheless, the revenue contribution from overseas operations for the banking system as a whole remained small and accounts for less than 11% of total group PBT, while the partnerships with foreign financial groups have mainly resulted in increased sophistication in risk management capabilities and technology.

Closer engagements and coordination between the Bank and other domestic and regional regulators would further enhance the state of readiness to manage the more difficult operating environment towards preserving financial system stability

Similarly, the Malaysian insurance and takaful sector will also be affected by the potential lower demand for protection and related products in a highly competitive industry. In particular, the expected decline in vehicle sales will negatively impact the motor insurance and takaful business which constituted 45% of gross insurance premiums in 2008. Premiums are also likely to be affected due to an increase in surrender rates and lower sums insured as a result of policyholders' efforts to reduce costs during these difficult periods. In addition, claims are expected to intensify due to higher incidences of theft and fraud as well as less regular maintenance.

Internally, Bank Negara Malaysia has enhanced its supervisory and surveillance capacity extensively over the years to be able to detect the potential problems at an early phase to allow for appropriate pre-emptive actions, including policy prescriptions to safeguard the soundness of the financial system. While structural changes in the global and domestic financial landscapes that took place over the decade have increased the complexities and inter-linkages in the domestic financial system, Bank Negara Malaysia closely engages other central banks, monetary authorities and supervisory agencies to monitor and respond, where necessary, in a coordinated manner in managing the current challenges. These include coordination in the area of ongoing financial surveillance and information sharing, provision of liquidity assistance and crisis management and resolution mechanisms on the domestic, regional and international fronts.

Moving forward, macroeconomic surveillance and supervisory activities will continue to focus on several key areas:

- Continuous strengthening in the robustness of risk transmission assessments, in terms of channels and magnitude of transmission from external developments to the Malaysian financial market, businesses, households and financial sector as well as spillovers of distress from non-regulated entities and markets on the financial system;
- Enhancing the ongoing scenario analyses at both the system and individual institution levels taking into account the dynamics of risk factors and close inter-linkages between players and sectors;
- Strengthening of engagement and communication strategies with stakeholders, including regulatees, business associations, SMEs and other regulatory authorities to enable early identification of signs of distress and emerging risks to financial system stability. These engagements are also aimed at ensuring continued access to financing;
- Continued engagement with regulatees to ensure pre-emptive action plans are in place and implemented in an effective and timely manner in order to ensure that the risk-bearing capacity of financial institutions is preserved at all times; and
- Intensifying regional and international cooperation and coordination in supervisory and regulatory activities to facilitate early identification of cross-border transmission of risks and vulnerabilities, as well as to prevent potential arbitrage that may result in destabilising concerns.

Development of the Financial Sector

Development of the Financial Sector

Against the backdrop of an increasingly challenging economic environment, the main policy focus for the financial sector in 2008 was to ensure that the financial sector remained resilient and continued to perform its financial intermediation function effectively in supporting economic activities. Coupled with the heightened surveillance and supervisory oversight on financial institutions, pre-emptive policy measures were introduced to address potential vulnerabilities to safeguard the resilience and soundness of the financial sector. In tandem with this, the Bank continued with efforts to strengthen the institutional capacity of the industry, modernise the financial infrastructure, diversify the financial system and realise the full potential of the Malaysian financial sector in contributing towards economic growth. To further cement Malaysia's position as a leading international Islamic financial hub, the Bank introduced several measures to accelerate the development of Islamic finance, both domestically and globally.

PRESERVING SOUNDNESS AND CONFIDENCE IN THE FINANCIAL SECTOR

Following several years of reforms and capacity building measures, which include further improving the supervisory framework, the Malaysian financial system is now on a much stronger foundation to venture into new businesses, undertake more complex risks and withstand shocks. With the far-reaching effects of the global financial crisis having adverse implications on the regional economies, greater importance has been placed on collaborative and concerted efforts within the region in responding effectively to the impact of the crisis. This includes improved mechanisms for cross-border cooperation between central banks and other regulatory authorities that aim to facilitate cohesive and meaningful action to safeguard regional stability. Towards this end, the Monetary and Financial Stability Committee (MFSC) of the Executives' Meeting of East Asia-Pacific (EMEAP) Central Banks, a dedicated committee comprising 11 central bank deputies in the East Asia and Pacific region, has put in place an integrated regional surveillance and crisis management framework to assist EMEAP economies in addressing concerns arising from the crisis that affects the regional countries. This cooperative framework has provided a key platform for the region to share information and assess the impact of the evolving global financial crisis on regional economies and the implications for central banks in the region. On 30 October 2008, the MFSC released a joint statement to reaffirm its commitment towards maintaining regional monetary and financial stability.

Following several years of reforms and capacity building measures, which include further improving the supervisory framework, the Malaysian financial system remains resilient and continues to effectively perform its intermediation function

In further accentuating regional coordination in pre-emptively mitigating the effects of the crisis and following the announcements made by a number of regional countries, the Bank and the Ministry of Finance jointly announced on 16 October 2008 that all deposits will be fully guaranteed by the Government through the Malaysia Deposit Insurance Corporation (PIDM) until December 2010. The Government guarantee covers all ringgit and foreign currency deposits with commercial banks, Islamic banks, investment banks and deposit-taking development financial institutions (DFIs) regulated by Bank Negara Malaysia. While it is unlikely that the guarantee would be called upon as the banking sector remains fundamentally strong, this precautionary measure serves to sustain confidence in the system amidst a more volatile global and regional environment.

The Bank also expanded the coverage of the financial safety net to insurance companies and takaful operators, allowing the industry to access the Bank's liquidity facility. While insurance companies in many other jurisdictions do not have access to such facilities from the central banks, this pre-emptive measure was taken to sustain confidence in the insurance sector. As developments in the global markets continue to unfold, the Bank remains vigilant and stands ready to extend its guarantees to include interbank obligations of banking institutions. These measures complement the enhanced oversight on the financial sector towards preserving confidence and maintaining the overall stability of the financial sector.

ENSURING CONTINUED ACCESS TO FINANCING

With the moderation in export, production and investment activities particularly in the second half of 2008, the challenge was to ensure that viable businesses affected by the economic slowdown continue to have adequate access to financing. Particular attention was given to small and medium enterprises (SMEs) which usually have less financial resources and flexibility to adjust and respond to market developments. Towards this end, efforts were intensified to strengthen the capacity of financial service providers such as the Credit Guarantee Corporation, SME Bank and Agrobank to better support the needs of SMEs. Developments in this area are illustrated in greater detail in the box article ``Development of Small and Medium Enterprises´´ in the Bank's Annual Report 2008.

The Bank introduced three new financing facilities, the SME Assistance and SME Modernisation Facilities, and the SME Assistance Guarantee Scheme to ensure viable SMEs adversely impacted by the current economic slowdown continue to have access to financing

In managing the repercussions of higher commodity prices in the first half of 2008, followed by a slowdown in economic activity in the second half of 2008, a series of measures were put in place to assist SMEs to enhance their efficiency and productivity as well as to help them manage their cash flow difficulty. To achieve this, two new financing schemes were established during the year, which are the SME Assistance and SME Modernisation Facilities, with a combined facility limit of RM1.2 billion. As at end-2008, these facilities have benefited 4,923 borrowers with new credit facilities approved amounting to RM1.1 billion. Given the good response to the facilities, the Bank established the RM2 billion SME Assistance Guarantee Scheme to replace the two facilities in ensuring that viable SMEs adversely impacted by the current economic slowdown continue to have adequate access to financing.

The worsening global economic conditions and the corresponding impact on the domestic economy further prompted the Government to enhance support granted to SMEs as well as the larger companies. Two new guarantee schemes have been introduced by the Government, which are the Working Capital Guarantee Scheme and the Industry Restructuring Loan Guarantee Scheme. The Working Capital Guarantee Scheme, totalling RM5 billion, will assist in funding the working capital requirements of companies with shareholders' equity below RM20 million, through the provision of a Government guarantee of 80% and the remaining 20% borne by financial institutions. The Industry Restructuring Loan Guarantee Scheme, totalling RM5 billion, aims to support long-term investment activities by large and medium-sized enterprises that would promote increased productivity and higher value-added activities, as well as greater use of green technology. The Government guarantee of 80% or 50%, depending on the size of the company, will help towards enhancing the provision of financing to support these forms of long-term investments.

Recognising the importance of having in place avenues for borrowers encountering financing difficulties to seek assistance, particularly in the current environment, the Integrated Contact Centre was established in July 2008 comprising BNMLINK, BNMTELELINK and the Complaints Management and Advisory section within the Bank. This Centre complements the various proactive efforts of individual financial institutions in assisting borrowers by serving as an easily accessible platform for the public to raise their financing issues. From October 2008 until January 2009, the Centre received 437 queries relating to access to financing issues from individuals and SMEs, and has since resolved about 65% of these cases.

Towards increasing interaction between banking institutions and borrowers, the Bank facilitates regular dialogues between industry associations and bankers to enable the better understanding of issues faced by businesses. The banking industry has also taken proactive efforts, with the Association of Banks in Malaysia intensifying its interface with borrowers through its toll-free channel, *ABMConnect*, which serves as a platform for general enquiries relating to banking services and credit issues. Since its launch in December 2008, *ABMConnect* has received 639 calls, of which 96% of the complaints and enquiries received were resolved. Banking institutions have also been organising roadshows and clinics all over the country, in an effort to increase interaction and reduce information gaps with their borrowers.

The Bank's Integrated Contact Centre, complemented with the industry's *ABMConnect*, were established to provide various avenues for borrowers encountering financial difficulties to seek assistance

STRENGTHENING INSTITUTIONAL CAPACITY

The significant progress achieved in the transformation of domestic financial institutions has resulted in stronger and more efficient domestic players with enhanced capability to compete and retain market share in the face of a more challenging business environment. A number of Malaysian financial conglomerates have also emerged as leading players in the region, offering a wide range of financial services.

The current economic climate and state of the global capital markets have nevertheless posed considerable challenges to the overall financial sector and the financial institutions. While considerable efforts were taken to further strengthen the overall financial sector, attention was also directed at addressing potential implications of the challenging operating environment on the resilience of certain sectors, particularly the general insurance industry, where fragmentation and a lack of scale are more apparent. At present, the general insurance industry is fragmented with 40 players, where 20 of the smaller players in total control only a 23.7% market share of gross premiums. In reinforcing the resilience of the general insurance industry as well as its role in facilitating business activity and offering risk protection products, efforts are being channeled towards strengthening the capacity and capability of the general insurers. The Bank continues to promote consolidation and rationalisation within this industry, with the intention of developing general insurers with sufficient capacity and scale of business to contribute meaningfully to the broader economy whilst remaining resilient during challenging market conditions.

Consolidation and rationalisation within the general insurance industry continues to be promoted to develop general insurers with sufficient capacity and scale of business

ENHANCING OPERATIONAL EFFICIENCY AND EFFECTIVENESS

In terms of operational flexibilities, efforts are ongoing to accord greater flexibility to general insurance companies to manage their expenses, especially in the more challenging business environment. The Guidelines to Control the Operating Costs of General Insurance Business (OCC Guidelines) originally issued in 1990, a key component of the regulatory framework for the industry, will be liberalised. The original intention of the OCC Guidelines was to control the escalating costs of the general insurance industry and to ensure that policyholders obtain insurance coverage at fair prices. The evolution of the industry over the years, coupled with the significantly strengthened prudential regulatory framework and oversight on insurance companies, have reinforced the need to gradually liberalise these prescriptive rules to allow insurance companies more flexibility to manage their operating expenses. This approach would enable insurance companies to manage their expenses in accordance with their business strategies, including distribution channel management.

As a means to enhance the revenue base of insurance companies through more diversified delivery channels and to promote greater insurance penetration, further flexibilities were accorded to encourage the utilisation of bancassurance as one of the key distribution channels for insurance companies. General insurance companies are now freely allowed to leverage on the widespread outreach of bank branches through entering into bancassurance arrangements with banking institutions. Greater bancassurance flexibilities have also been accorded to life insurance companies, including enhanced opportunities to tap on banking institutions' extensive customer database via direct mailing arrangements as well as the ability to pay production and persistency bonuses to their banking partners. These measures are aimed at improving customer service quality and driving higher bancassurance sales, as a means to increase insurance penetration in the country.

ENHANCING THE INFRASTRUCTURE FOR FINANCIAL MARKET DEVELOPMENT

The global financial crisis has demonstrated the speed and magnitude at which the financial markets can transmit shocks, reinforcing the importance of having in place effective infrastructures that would enable forward-looking assessments of the risk-taking activities in the financial markets and their implications to financial stability. To support this need, significant effort was put in place to develop a comprehensive database that is able to collate data and information relating to the debt securities market from various sources. The Information and Surveillance System for Debt Securities (INSIDES), now fully implemented, acts as a one-stop database enabling effective analysis of trends and impact assessments of the financial market. This is complemented by ongoing efforts to enhance the supporting infrastructure to cater for foreign currency issuances and the shelf listing of debt securities.

To ensure the continued growth and dynamism of the financial markets amidst greater market uncertainties and in line with the recommendation in the Financial Sector Masterplan (FSMP), the Government will be establishing a Financial Guarantee Institution (FGI) to provide greater opportunities for corporations to obtain credit enhancements to access the bond market. The FGI will enable these corporations to have continued access to the financial markets to raise funds, thus reducing financing costs, addressing potential maturity mismatches and diversifying funding sources within the financial system. The Bank is currently developing the supporting prudential regulatory and supervisory frameworks governing the operations of the FGI, which will encompass requirements on capital, reserving and underwriting standards.

SUSTAINING THE CONTINUED DEVELOPMENT OF HUMAN CAPITAL

Despite the more challenging economic environment, the Bank has continued to focus on the development of human capital to support the long-term growth prospects of the financial sector. Recognising the importance of having a coordinated and collaborative approach to human capital development in the financial services industry, the Bank and the Securities Commission jointly established the Financial Services Education Centre (FSEC) to provide high quality training solutions across the different segments of the financial services industry. The FSEC provides a platform for coordinated initiatives among the different training arms through collaboration with Islamic Banking and Finance Institute Malaysia (IBFIM), Institute of Bankers Malaysia (IBBM), Malaysian Insurance Institute (MII) and the Securities Industry Development Corporation (SIDC). Drawing on the complementarities and strengths of these various training institutes, the FSEC aims to enhance the standards and delivery of training to equip the financial industry's workforce with the prerequisite skills and capabilities.

The Financial Sector Talent Enrichment Programme (FSTEP), another industry-led initiative supported by the Bank, involves the development and training of graduates to provide a foundation of the financial services industry, through a combination of classroom training and practical internships. Following its inception in 2007, the curriculum has been enhanced to be more structured, with an ongoing review of the training syllabus through input from industry players, and includes a particular focus on improving the participants' proficiency in English. Since the programme's inception, 289 participants have completed the programme whilst 318 participants are currently undergoing technical training.

ISLAMIC FINANCE – PURSUING MIFC INITIATIVES

The Malaysia International Islamic Financial Centre (MIFC) initiative encapsulates the country's longstanding experience and expertise in Islamic finance towards cultivating its global growth prospects. Islamic banking and takaful assets (including assets held by DFIs) now constitute 15.2% of the total banking and insurance assets (including assets held by DFIs) of the Malaysian financial system. In 2008, three locally-incorporated foreign banks established full-fledged Islamic subsidiaries, while three Islamic subsidiaries of domestic banking institutions were operationalised. As at end-2008, there were 17 Islamic banking institutions and 16 Islamic banking operations conducted through windows by commercial banks, investment banks and DFIs. A joint venture between a Dubai-based financial institution with companies from Malaysia and Singapore saw the establishment of the world's largest retakaful company in Malaysia, marking an important milestone for the development of the retakaful industry.

The international dimension of Islamic finance in Malaysia was further strengthened with increased participation by both domestic and foreign players engaging in international currency business under the flagship of MIFC. One International Islamic Bank (IIB) licence and one International Takaful Operator (ITO) licence were granted to foreign financial institutions during the year, whilst five domestic and foreign financial institutions were granted approvals to establish International Currency Business Units (ICBUs). On the regulatory front, comprehensive Guidelines on IIB, ITO and ICBU were issued during the year, providing greater clarity on the scope of business, tax incentives and regulatory framework governing these institutions.

As Islamic finance becomes further integrated into the international financial system and as Islamic financial innovation advances to the next level, conformity to the requisite principles of Shariah becomes increasingly important to preserve the resilience of Islamic financial transactions. Hence, initiatives instituted by the Bank were aimed at promoting a clear and accurate understanding and consistent interpretation of Shariah principles in Islamic finance at the domestic and international levels. The International Shariah Research Academy for Islamic Finance (ISRA) was established in March 2008 to enhance the interaction and exchange of ideas among industry players and scholars to promote applied research in the area of Shariah and Islamic finance. Through research and rigorous intellectual dialogue, ISRA aims to promote innovation and dynamism towards driving Islamic finance into new frontiers of development. Academic appreciation of Islamic finance was also enhanced through the introduction of the PhD and Masters programmes in Islamic finance by the International Centre for Education in Islamic Finance (INCEIF) in January and June 2008 respectively.

The Bank has also embarked on an initiative to develop a comprehensive codification of Shariah contracts, known as Shariah Parameters, to enhance the application of Shariah rules and principles, provide clarity and promote a more consistent application of Shariah contracts within the Islamic financial system. This initiative, unique among regulators globally, is expected to provide guidance to the Islamic finance community on matters relating to the *muamalat* (commercial transactions) aspects of the Shariah. It is expected to enhance understanding on the practical application of Shariah principles for Islamic finance, and would contribute towards a more innovative and vibrant development of Islamic financial products and services. The Shariah Parameters, once issued, will serve as a point of reference for the harmonisation of practices among the Islamic finance community.

Despite the pronounced decline in global market activities, Malaysia remained the largest global issuer of sukuk, accounting for 61.4% of total global sukuk outstanding as at end-2008. As at end-2008, the outstanding sukuk market in Malaysia comprised 36% of outstanding debt securities in Malaysia, with outstanding sukuk issued by the private sector accounting for 55.9%

of outstanding private debt securities (PDS). In developing Malaysia as a world-class Islamic financial centre, the Bank continued to pursue strategic branding and promotional activities, albeit on a more selective basis, to advance the growth of Malaysia as an international hub for Islamic finance. Malaysia's efforts in advancing the MIFC initiative are gaining greater recognition, exemplified through MIFC being named as the ``Best International Islamic Finance Centre´´ at the Second Annual London Sukuk Summit Awards of Excellence.

ENHANCING SURVEILLANCE ON MARKET CONDUCT AND STRENGTHENING FINANCIAL CAPABILITY OF CONSUMERS

As part of the Bank's ongoing initiatives to enhance the market conduct practices of financial players and financial capability of consumers, the Bank continued with its initiatives to promote fair and equitable market practices. At the same time, existing channels were enhanced for consumers to seek redress and financial advice.

The AKPK has taken proactive measures to provide assistance to borrowers facing financial difficulties and is currently also working towards engaging employees affected by retrenchment and reduction in working hours

The Bank's Integrated Contact Centre, while addressing issues relating to access to financing, also serves as a key platform for consumers to seek financial advice and surface complaints related to the financial institutions regulated by the Bank. BNMLINK was also extended to the Bank's branches in Johor Bahru and Penang in September 2008. For the year 2008, the Centre attended to 144,988 customer enquiries in total, of which 136,686 were related to financial enquiries and advisory whilst 8,302 were complaints on banking and insurance matters. The Centre has resolved over 74% of these complaints. Besides the Centre, the Credit Counselling and Debt Management Agency (AKPK) that was established by the Bank in 2006 also provides financial counselling and debt management advice to individuals. To date, AKPK has successfully serviced about 73,000 customers, of which over 21,000 have received assistance under its Debt Management Programme and more than 52,000 have benefited from the credit counselling services. In light of the current economic environment, the AKPK has taken proactive measures to provide assistance to borrowers facing financial difficulties and is currently working towards engaging employees affected by retrenchment and reduction in working hours, to manage their financial position. In addition, AKPK has contributed towards improving financial education through various teaching modules, book publications, roadshows and advertisements.

To safeguard the interests of consumers and maintain public confidence in the industry, the surveillance and enforcement tools within the Bank were enhanced during the year to focus on three main areas, consisting of thematic market examinations, incognito visits to assess the lending behaviour of banking institutions and the level of retail banking service quality, as well as media surveillance to ensure that advertisements and product promotions on the print and electronic media are accurate. These more focused and intensified surveillance activities have enhanced financial institutions' operational procedures to better serve the needs of the customers and improve the level of disclosures of their products and services.

Financial capability initiatives during the year continued to be directed at empowering consumers to make informed decisions, particularly, for planning their future financial needs. Outreach programmes targeting new groups such as the disabled community and newlyweds were included in the year's financial education programme, which included publishing the *Buku Wang Saku* and *insuranceinfo* reading material in Braille for the visually impaired. The ``*Minggu Kesedaran Kewangan 2008*´´ organised in October 2008 in collaboration with the Financial Mediation Bureau, AKPK and PIDM received overwhelming response, especially from the SMEs and school and university students with a total of more than 17,600 visitors over a span of three days.

ANTI-MONEY LAUNDERING AND COUNTER FINANCING OF TERRORISM

While the risk of money laundering and terrorism financing activities remains small, the Bank continued to exercise vigilance on the evolving money laundering and terrorism financing threats that could potentially undermine confidence in the financial sector. The anti-money laundering and counter financing of terrorism (AML/CFT) legal and regulatory framework were reviewed and amended to comprehensively cover all categories of financial institutions and designated non-financial businesses and professions as set out in the Financial Action Task Force (FATF) 40+9 Recommendations (40 Recommendations on Money Laundering and 9 Special Recommendations on Terrorist Financing). Specific education programmes were organised to enhance the reporting institutions' AML/CFT compliance culture and to provide updated information on AML/CFT developments. These included conducting compliance workshops, conferences, on-site examinations and self-assessment questionnaires to gauge institutions' level of compliance with the relevant AML/CFT requirements.

Given the transnational nature of money laundering and terrorism financing activities, the Bank signed six Memoranda of Understanding (MoUs) with its foreign counterparts in 2008 on the exchange of financial intelligence, bringing the total number of MoUs signed by the Bank to 17. In the Asia/Pacific Group on Money Laundering (APG)'s mutual evaluation exercise conducted on Malaysia in 2007, the report affirmed Malaysia's robust and comprehensive legal framework, preventive measures as well as effective domestic and international inter-agency cooperation arrangements to support capacity building, surveillance and enforcement activities on anti-money laundering. This result has positioned Malaysia as one of the few countries in the region that is comparable to more advanced member countries in complying with the FATF 40+9 Recommendations.

OUTLOOK

The coming year is expected to be a more challenging year for the financial sector, as uncertainties in the global financial environment continue to unfold. Malaysia's financial sector is on a much stronger footing than before. Reforms and capacity building measures will continue to be instituted to enable our financial institutions to withstand shocks. The financial sector is currently characterised by the stronger capital levels and profitability positions. Ongoing efforts to explore new markets and businesses for expansion and income diversification amidst a more challenging global financial outlook would position Malaysia's financial sector strategically over the long run.

The emphasis in the months to come will be to reinforce the role of the financial sector in playing its intermediation function and ensuring that adequate financing is being channeled to support viable economic activities. Efforts will also be focused on strengthening the core foundations that accord resilience to the financial system to withstand shocks and episodes of financial turmoil. These will be complemented by strengthened prudential regulations to mitigate excessive risk-taking and enhanced surveillance and oversight functions to ensure emerging vulnerabilities are promptly and pre-emptively addressed. Cooperation arrangements between regulatory agencies within Malaysia will continue to be strengthened, establishing clear and unambiguous responsibilities to enable prompt and decisive measures to be taken, where appropriate.

To place the Bank in a greater state of readiness to face future challenges, the holistic review of the Central Bank of Malaysia Act 1958 was completed during the year where the proposed Central Bank of Malaysia Act will provide clarity to the Bank's roles and functions. Amongst others, the proposed Act articulates the regulation and supervision of financial institutions and the promotion of a sound and progressive financial system. In tandem with this, the Bank is also in the process of reviewing all key legislation governing financial institutions and intermediaries that are under the oversight of the Bank and expects to finalise the review by end-2009.

The next phase of development for the financial sector will be spearheaded by the Bank's liberalisation roadmap, in line with Phase 3 of the FSMP which calls for greater integration with the international financial system. The strategic intent of the various measures contained in the liberalisation roadmap is to enhance the contribution of the financial services sector to economic growth. The role of the financial sector as an effective enabler and driver of economic growth will be reinforced, as well as its ability to catalyse and accelerate the development of other economic sectors, particularly the services sector. Malaysia's competitive advantage in Islamic finance will be strengthened, expanded and developed as opportunities emerge. In liberalising the financial sector, the Bank will adopt a gradual and phased approach to ensure that the overall stability of the financial system is safeguarded whilst reaping the resultant benefits to the economy.

Regulatory Framework for Foreign Financial Institutions and Investment Banks in Malaysia

Developments in the global financial markets over the recent year have placed great scrutiny on the effectiveness of regulatory and supervisory oversight regimes around the world. These recent events have emphasised the crucial need for sound regulatory and supervisory frameworks which keep pace with the rapidly evolving financial landscape.

This article outlines the key features of the regulatory and supervisory regime that is applied on foreign banking institutions and insurance companies, and on the investment banks operating in Malaysia. The oversight of foreign banks and insurers is aimed at reinforcing the soundness and resilience of their domestic operations, whilst the regulatory framework on investment banks intends to ensure prudent business operations. This supports the objective of maintaining the overall stability of the financial sector.

The Regulatory Approach for Foreign Financial Institutions in Malaysia

Malaysia's financial system hosts a diversity of foreign financial institutions, with many of them having an entrenched presence – being pioneers during the formative years of the Malaysian financial system in the 19th century. At present, foreign financial institutions control 26% of banking and insurance sector assets. The presence of these financial institutions, each with distinct business strengths and niches, infuses the Malaysian financial community with improved technical expertise, best practices and technology and enables consumers to benefit from world-class products and services.

However, the recent crisis has drawn attention to the far-reaching implications that internationally active financial institutions have on the financial stability of individual economies which host their presence. Given their widespread businesses and the complexity of their operations and governance processes, concerns arise on their transmission of external shocks into host markets. While many globally-renowned financial institutions operate in the Malaysian financial system, the regulatory framework in Malaysia provides adequate safeguards to minimise cross-border contagion effects.

An important feature of Bank Negara Malaysia's regulatory framework on the Malaysian operations of foreign banking institutions and insurance companies is the requirement for local incorporation. Coupled with the existing comprehensive financial safety net in place, the operations of foreign banking institutions and insurance companies in Malaysia and their customers' interests are safeguarded as illustrated below:

Key Features of the Regulatory and Supervisory Framework for Foreign Financial Institutions in Malaysia

Local incorporation creates a legal separation between the domestic entity and its foreign parent company

Greater degree of protection to Malaysian consumers
- Assets and capital of the domestic entity are `ring-fenced´ to ensure that obligations in Malaysia, especially to bank depositors and insurance policyholders, are firstly fulfilled.
- Repatriation of dividends, payment of management fees and extension of loans and advances to the foreign parent company are subject to compliance with prudential requirements.

Permanent capital commitment to support Malaysian operations
- Imposition of minimum capital requirements on the domestic entity secures dedicated capital funds in Malaysia to safeguard the sustainability and continuity of their Malaysian operations.

Constitution of a separate board of directors in Malaysia whose fiduciary duties are specific to the Malaysian operations
- The board is responsible for the stewardship of the domestic entity, including evaluating the suitability of global strategies in the context of the domestic market and being accountable for the adoption of such strategies.
- The participation of Malaysians on the board is expected to imbue local knowledge and ensure business strategies are aligned with the local environment.

Protection under the financial safety net

Regulatory and supervisory oversight by Bank Negara Malaysia
- Same degree of oversight by Bank Negara Malaysia is exercised on foreign financial institutions, as in the case of domestic players.
- Adequate powers to take prompt and pre-emptive measures to address any emerging risks and vulnerabilities of the financial institution.

The interests of bank depositors and insurance policyholders are safeguarded
- Deposits in the locally-incorporated foreign banks are protected under the Malaysia Deposit Insurance Corporation on the same basis as domestic banking institutions.
- Mechanisms are in place for the protection of insurance policyholders through the insurance guarantee scheme fund.

Eligible for Bank Negara Malaysia's liquidity assistance
- Locally-incorporated foreign banks can access these facilities subject to the same criteria as domestic banks.

The Regulatory Approach for Investment Banks in Malaysia

Investment banks in Malaysia operate within a regulatory regime where similar rigour is applied in the prudential regulatory and supervisory approach as for commercial banks. The characteristics of the Malaysian regulatory and supervisory framework for investment banks include:

Key Features of the Regulatory and Supervisory Framework for Investment Banks in Malaysia

Dual regulation and supervision by Bank Negara Malaysia and the Securities Commission

Clear accountabilities minimise regulatory gaps and overlaps
- Arrangements formalised under a Memorandum of Understanding between the two agencies ensure that responsibilities are unambiguous and well-defined.
- Bank Negara Malaysia is responsible for the prudential regulation of investment banks to ensure their safety and soundness and the overall stability of the financial system.
- The Securities Commission is responsible for the investment banks' business and market conduct in order to promote market integrity and investor protection in the capital market.
- Cohesive arrangements facilitate prompt and decisive action by the two agencies.

Similar regulatory and supervisory regime to commercial banks

Prudential regulation of investment banks

- Investment banks are subject to prudential requirements, which are similarly applied to commercial banks, including Basel II, limits on exposures to single counterparties, connected lending restrictions and corporate governance standards.

Supervisory and surveillance framework

- Comprehensive and holistic risk assessments are conducted on the investment banks' businesses and overall health, including the conduct of on-site examinations.
- Enables early detection and pre-emptive action to be taken to address emerging risks and vulnerabilities in individual investment banks.
- Banking groups that have both commercial banks and investment banks are supervised on a consolidated basis to enable comprehensive assessments of their safety and soundness. Bank Negara Malaysia is also organised internally to support such oversight, with a dedicated department supervising financial conglomerates.

Access to wider sources of funding and liquidity

Able to accept deposits

- Investment banks in Malaysia can accept deposits of RM500,000 and above and are players in the interbank market.
- This provides them with more stable and diversified sources of funding.

Eligible for Bank Negara Malaysia's liquidity assistance

- Investment banks can access these facilities, providing a safety net for their temporary liquidity needs.

The regulatory and supervisory framework for financial institutions in Malaysia will be continuously strengthened to ensure that financial stability is preserved at all times.

Prudential Regulation and Supervisory Framework

Prudential Regulation and Supervisory Framework

INTRODUCTION

Bank Negara Malaysia continued to focus on strengthening the pillars of a sound prudential regulatory framework in 2008. Despite the highly volatile market conditions and the global financial turmoil, the Malaysian financial sector remained resilient. This has been supported by the underlying strength of the system built through extensive regulatory reforms undertaken over the years following the Asian financial crisis in 1997, and the continuing rigorous supervision of financial institutions. An appropriate balance between principle-based and rule-based regulations which characterises the prudential regulatory framework has also promoted the orderly growth of the various components of the domestic financial sector. Against the backdrop of the current global financial turmoil, the critical importance of this balance is clear in ensuring that financial innovation does not outstrip the capacity of the financial system to manage the associated risks. While maintaining this balance, ongoing enhancements to the regulatory framework will continue to be pursued, in line with changes that are taking place at the international level.

The Malaysian financial sector remained resilient, supported by the underlying strength of the system built through extensive regulatory reforms and the continuing rigorous supervision of financial institutions

Throughout the year, the Bank's supervisory activities were responsive to developments unfolding on the global front. The Bank's supervisory resources remained in a state of heightened alert as the external environment continued to deteriorate, with greater attention directed towards focused risk assessments and stress testing, both at the micro and macro levels, to detect vulnerabilities of the financial sector to further shocks. This has supported a forward-looking view of the financial sector and enabled the Bank to take pre-emptive actions in ensuring that financial institutions have in place effective plans, including capital plans, to respond to any possible shocks.

REGULATORY DEVELOPMENTS

The continued stability of the domestic financial sector in 2008 allowed further progress to be achieved in ongoing efforts to strengthen the regulatory framework. This work has been mainly directed at updating and reinforcing existing regulations in light of the changing market environment, aligning the prudential standards with international best practices, and consolidating the regulatory framework across financial activities and sectors.

The unprecedented nature and scale of the global financial crisis had, however, severely tested the adequacy and robustness of prudential frameworks around the world. In Malaysia, a sound regulatory framework that has been in place; particularly with respect to capital adequacy, liquidity risk management, the introduction of new financial products and the activities of investment banks; contributed towards averting the problems that were at the epicentre of the financial crisis. This framework reflects the Bank's commitment to a gradual process of progressive deregulation, whereby prescriptive rules and a more active supervisory role have been preserved where appropriate, in tandem with the Bank's assessment of the capacity of individual institutions and the system as a whole to manage and mitigate risks.

During the year, the emphasis of regulatory initiatives continued to be directed at promoting sound corporate governance and risk management practices, and the implementation of more robust capital adequacy regimes across the key sectors of the financial services industry. The implementation of Basel II for banking institutions in 2008 and the Risk-Based Capital (RBC) Framework for insurers in 2009 were significant milestones in putting the mainstays of the financial sector on firmer footing. The prudential framework was also brought into greater alignment with the International Financial Reporting Standards (IFRS) following revisions to valuation standards applicable to insurance companies. The proposed Central Bank of Malaysia Act will further strengthen a solid foundation for both micro-prudential and macro-prudential stability.

The emphasis of regulatory initiatives continued to be directed at promoting sound corporate governance and risk management practices, and the implementation of more robust capital adequacy regimes across the key sectors of the financial services industry

The following sections highlight key developments in the prudential regulatory framework in 2008.

Capital adequacy

Basel II and the Capital Adequacy Framework for Islamic Banks (CAFIB) were implemented smoothly on 1 January 2008. The key components of Basel II and CAFIB are depicted in Table 3.1. The Basel II framework adopted in Malaysia is consistent with the framework developed by the Basel Committee on Banking Supervision (Basel Committee), with national discretion exercised where appropriate based on prudential considerations to reflect domestic circumstances. 43 banking institutions have opted to adopt the Standardised Approaches for determining their regulatory capital requirements. The remaining 13 banking institutions which have been given approval to adopt the Internal Ratings-Based (IRB) Approach for credit risk have been allowed to remain under the Basel I regime to comply with regulatory capital requirements until end-2009 in order to reduce the implementation costs associated with the transition to Basel II.

In August 2008, the Bank released a concept paper on the securitisation component of the Basel II framework based on the Standardised Approach for industry feedback. The concept paper builds on existing guidelines issued in 2003 which sets out risk management expectations and the regulatory treatment for banking institutions' involvement in asset-backed securitisation activities, and proposes more risk-sensitive minimum capital requirements for securitisation exposures, including off-balance sheet exposures to special purpose vehicles (SPVs), taking into consideration the rating, maturity and seniority of such exposures. In addition, the framework also calls for more stringent disclosure requirements on structures that provide for implicit recourse by investors to the originating banking institutions for exposures held, thus enhancing market assessments of the potential risk exposures of banking institutions. The Bank is in the process of examining industry feedback received in response to the concept paper before finalising the framework for implementation in 2009. Based on the feedback received, further refinements to the framework will consider additional guidance to facilitate the assessment of whether an effective transfer of risk has taken place in a securitisation transaction for the purpose of according regulatory capital relief. As demonstrated by the crisis, this is critical to avoid arbitrage and ensure that adequate capital is held against securitisation exposures.

Table 3.1
Basel II and CAFIB: Available Approaches for Risk-Weighted Capital Ratio Computation from January 2008

Credit Risk	i) Standardised Approach
Market Risk	i) Standardised Approach ii) Internal Models Approach
Operational Risk	i) Basic Indicator Approach ii) Standardised Approach iii) Alternative Standardised Approach

With the substantial completion of work on the Standardised Approaches, resources were directed to prepare for the implementation of the IRB Approach for credit risk from 2010 in line with the timeline announced by the Bank. In July 2008, the Bank released details on the IRB Approach under the revised capital framework which are largely based on the document issued by the Basel Committee, with additional guidance setting out the supervisory expectations on the oversight roles of the board and senior management, the validation of internal models and use test methodologies. The expectations on the board emphasise the critical need for boards to have, or be adequately supported by, the necessary competencies that will be required to effectively discharge their oversight responsibilities.

The option to adopt the IRB Approach was also extended to Islamic banks, thus enabling banks that are part of banking groups adopting the IRB Approach to leverage on group infrastructures and policies for determining regulatory capital. While the Islamic Financial Services Board has not issued any specific rules on the IRB Approach, it has provided national supervisors with the discretion to implement the IRB Approach for Islamic banks in their respective jurisdictions. The same principles and methodologies underpinning the Basel II IRB Approach for conventional banks have been adopted in Malaysia for Islamic banks. Notwithstanding the group-driven implementation of the IRB Approach by Islamic banks, Bank Negara Malaysia expects Islamic banks to implement effective oversight arrangements even at the entity level to support the successful migration to Basel II.

Engagements with banking institutions during the year sought to identify and address specific implementation challenges associated with the adoption of the IRB Approach that would, in turn, have a bearing on the adequacy of capital levels maintained by banking institutions. For example, different approaches have been taken by IRB banks in defining downturn economic conditions for purposes of estimating downturn loss given default (LGD) as well as in adjusting retail probability of default (PD) estimates to cater for seasoning effects. As potential differences in these interpretations between the Bank and individual institutions have significant implications for an institution's model development, validation and roll-out plans, the Bank will maintain close discussions with IRB banks throughout 2009 to facilitate the smooth execution of the IRB framework, while ensuring that banks adopt sufficiently rigorous approaches to the determination of risk parameters.

The supervisory review of banking institutions' IRB models is a continuing process and has intensified as banking institutions recalibrate existing rating models and roll out new ones. The supervisory review aims to ensure that regulatory capital levels maintained by banking institutions based on internal models are well supported by credible estimates of an institution's risk exposure, and comprehensive policies and processes to ensure that the models are robust. As part of the transition to the IRB Approach, banks will be required to commence reporting on their capital adequacy levels under the IRB Approach on a parallel basis in the second half of 2009. This transition will provide a further opportunity for banking institutions and Bank Negara Malaysia to test the robustness of internal models.

The supervisory review aims to ensure that regulatory capital levels maintained by banking institutions based on internal models are well supported by credible estimates of an institution's risk exposure, and comprehensive policies and processes to ensure that the models are robust

During the year, the Bank also issued guidance on the supervisory review process (Pillar 2) and disclosures on capital adequacy (Pillar 3), which form integral components of the revised capital adequacy frameworks, for industry feedback. Pillar 2 deals with risks that are not fully captured or addressed under Pillar 1 (such as interest rate risk in the banking book, concentration risk and residual risks). Central to Pillar 2 is the requirement for banking institutions to implement an effective and rigorous internal capital adequacy assessment process that is commensurate with the scale, nature and complexity of their operations. This is reinforced by Pillar 3 which is aimed at promoting more effective market discipline through enhanced disclosures on banks' capital adequacy levels relative to risk. The Bank expects to finalise these guidelines in 2009.

New workstreams on capital are also anticipated in light of the recent announcement by the Basel Committee to further strengthen certain aspects of the Basel II Framework in response to the crisis. This will include the tightening of capital treatments for securitisation activities, a review of the use of ratings to drive capital charges, further Pillar 2 guidance and enhanced disclosures under Pillar 3. To varying degrees, the issues under consideration have been reflected in the development of the revised capital framework for banking institutions in Malaysia. For example, rigorous expectations regarding operational requirements that must be met in order to obtain capital savings from securitisation transactions have already been incorporated in the securitisation framework. Rating agencies are also subject to a formal recognition process that requires the agencies to demonstrate their observance of robust standards in rating approaches before their ratings may be used for purposes of determining regulatory capital. The Bank will continue to monitor international developments closely, with a view to further enhance the domestic framework after considering the implications of any proposed changes in the context of the domestic environment.

The implementation of the RBC Framework for insurers on 1 January 2009 completed an important component of the overall objective towards ensuring a strong capital foundation for the financial sector. The RBC Framework, which replaces the previous Margin of Solvency (MOS) regime, provides for capital assessments that are more aligned to the specific risk profiles of individual insurers, and reflective of market-consistent valuations. After a parallel run of almost two years during which the Framework underwent several refinements to enhance the integrity of the Framework, legislative changes were approved to bring the Framework into effect. Preliminary observations on the impact of the implementation of the RBC Framework are provided in the box article "Implementation of the Risk-Based Capital Framework for Insurers". Since the implementation of the Framework, further adjustments have been necessary to address the impact of market interest rates used in the valuation standards moving significantly out of line with historical norms. The Bank will continue to monitor market conditions closely in the current environment to ensure that the Framework parameters remain appropriate and relevant at all times. The year also saw preliminary groundwork laid for the development of a RBC Framework for takaful operators. The Bank expects to progress this work towards an industry consultation phase in 2009, focusing on the options and underlying Shariah precepts for designing a risk-based capital model for takaful operators.

Corporate governance

In line with the Bank's firm belief in continuing education as a key strategy to raise the bar on corporate governance, the Financial Institutions Directors' Education Programme (FIDE) was launched in November 2008. FIDE, which aims to support the development of highly effective boards of directors of financial institutions, is the culmination of a collaborative effort between the Bank, Malaysia Deposit Insurance Corporation (PIDM) and the International Centre for Leadership in Finance over a two-year period. The resulting programme offers a unique platform to tackle the specific challenges and issues that confront boards of financial institutions.

FIDE offers a unique platform to tackle the specific challenges and issues that confront boards of financial institutions

Drawing extensively on insights from the Bank's supervisory observations and feedback obtained directly from directors regarding the functioning of boards of financial institutions, FIDE's objectives are to deliver solutions that will: (i) strengthen the skill sets and knowledge of directors to effectively discharge their responsibilities; (ii) promote excellence in directors' performance; (iii) equip directors with a sound understanding of current issues and developments in the financial industry; (iv) create an environment for directors to learn from each other; and (v) build a deep pool of qualified independent directors to serve on the boards of financial institutions. The recent rise of bank and corporate failures globally due to inadequate oversight by the board and senior management affirms the relevance of these objectives.

FIDE's objectives are delivered through three complementary channels – an instructional and interactive education programme, an information sharing network, and a series of occasional talks and presentations on developments and

Implementation of Risk-Based Capital Framework for Insurers

The Risk-Based Capital Framework for Insurers (RBC) came into effect on 1 January 2009 after almost two years of parallel run with the previous solvency regime from April 2007. The framework aims to better align the regulatory capital requirements with the underlying risk exposure of each individual insurer, improve the transparency of prudential buffers, and allow greater flexibility for insurers to operate at different risk levels that are commensurate with risk management infrastructure and practices. A new set of valuation rules was also introduced to ensure that assets and liabilities are valued in a realistic and market-consistent manner.

A key objective of RBC is to ensure that prudential buffers reflect the underlying risk profiles of individual insurers. To achieve this, RBC requires more explicit quantification of the various risks inherent in the insurance business. This provides insurers with an additional tool to manage business more effectively, by identifying the sources of risk, and implementing the appropriate measures to mitigate, manage or remove risks. In the long run, having an improved understanding of the relationship between risk and capital, together with business strategies centred on sound risk management practices, will enable insurers to achieve sustainable profitability whilst safeguarding policyholders' interests.

Under RBC, capital adequacy requirements are more granular and risk-sensitive compared to the previous solvency regime which did not differentiate between the nature and sources of risk. For example, insurers whose asset portfolios are concentrated in high-risk assets or assets that are inadequately matched with the corresponding liabilities will be required to hold more capital under RBC compared to the previous solvency regime. Similarly, insurers who underwrite volatile lines of business or are highly concentrated in a single line of business will be required to hold more capital than insurers with diversified portfolios of relatively stable lines of business. The new solvency measure is hence a better reflection of financial strength and has resulted in greater differentiation between insurers with varying risk profiles. The new capital adequacy requirements are also based on explicit capital charges for market, credit, insurance and operational risks, thereby enhancing transparency and improving insurers' ability to identify, measure and manage the risks inherent in the insurance business. This will enable insurers to respond to emerging risks in a more pre-emptive manner.

With the introduction of RBC, insurers with capital resources that are commensurate with their risk profiles will have higher Capital Adequacy Ratios (CAR), thus allowing for the more efficient deployment of any 'excess' capital towards value generating activities. A number of insurers with inadequate capital and exhibit low CAR under RBC have undertaken remedial actions, and are in the process of reducing the overall level of risk exposure or injecting additional capital. Throughout the parallel run, the Bank has required these insurers to submit capital management plans with specific milestones on strategies and action plans to improve their capital positions. These milestones and action plans are closely monitored to ensure an orderly transition to the RBC regime.

Chart 1
Capital Adequacy Positions of Insurers as at December 2008

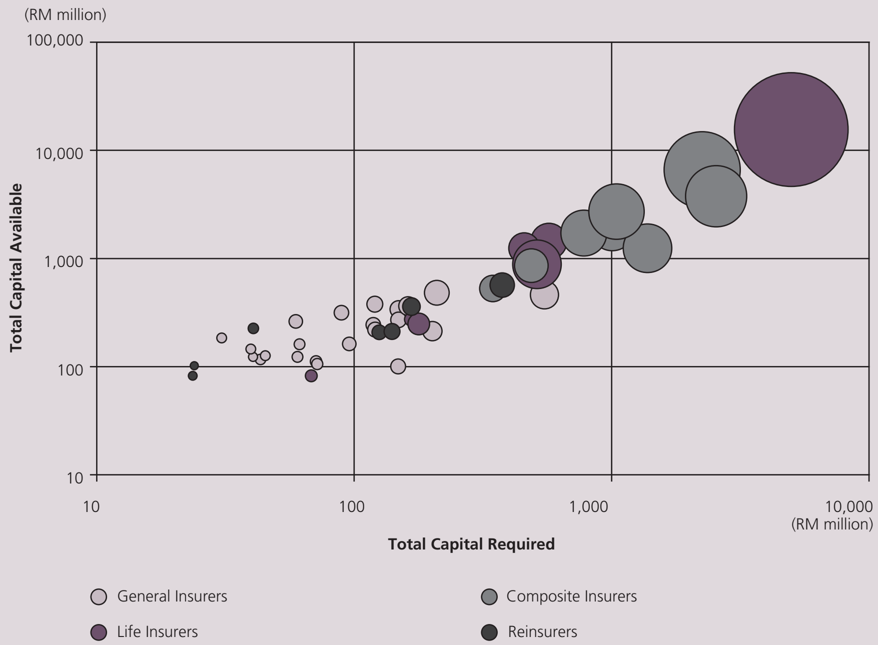


Chart 1 provides a snapshot of the current solvency levels in the industry by comparing the capital available against the capital required (All Funds) for insurers in the general, life, composite and reinsurance sectors, with the size of the bubbles denoting relative size by total assets. Life and composite insurers are typically larger, offer a wider range of products including complex products, and have greater exposure to market risk, hence the higher capital requirements.

To achieve its objectives, RBC is supported by a new set of valuation rules, requiring insurance liabilities and the related assets to be valued on a realistic basis, using market values or market value proxies, and which reflect the prevailing conditions in the business and economic environment.

The implicit margins that existed in the old valuation rules for insurance liabilities have been replaced with explicit margins for adverse deviations, which are now based on the actual experience of each individual insurer. For example, general insurers are now required to ensure that reserves are sufficient to meet expected claims based on the actual volatility of the claim patterns observed in the individual portfolios. Similarly, life insurers must hold reserves based on actual experience of mortality, morbidity, expenses, and persistency, instead of using a standardised mortality table with a fixed margin for prudence. In addition, insurers who underwrite innovative products with financial guarantees must hold additional reserves to ensure that those guarantees can be met even in adverse market conditions.

On the asset side, the introduction of market values has resulted in a more realistic balance sheet in accordance with the requirements of the relevant accounting standards. In response, many insurers have already taken the necessary steps to optimise asset portfolios according to risk appetite and expected return, while others are planning to make similar tactical shifts at the right market levels. Investment strategies are being rebalanced in response to prevailing market conditions and to improve the degree of matching between assets and liabilities. Portfolio changes during the parallel run have resulted in an increased level of assets of higher quality, which has served to support insurers well in the light of ongoing uncertainties in the capital markets.

The introduction of RBC has also provided the insurers' management teams with an additional quantitative tool to analyse and monitor the risks inherent in insurance activities. This shift of focus towards risk and its relationship with capital requirements has enhanced overall risk awareness and improved the quality of operational risk management and corporate governance. Many insurers are enhancing operations to improve their risk profiles, for example, by improving the quality of risk selection and underwriting, and by reducing volatility in loss experience through better claims management. Life insurers are also placing greater emphasis on product design and pricing, particularly to enhance the capital efficiency of their product range.

A survey of insurers also revealed positive changes to the intensity and breadth of oversight and discussion by Boards and Board Committees as a result of additional information arising from RBC. The same survey also revealed that many insurers are exploring other avenues to complement existing risk mitigants or increase available capital resources, such as reinsurance to transfer out excess insurance risks, derivatives to hedge asset-related risks or by the use of hybrid capital instruments.

Another positive development in the insurance industry arising from the introduction of RBC is the enhancement of insurers' technical expertise. The increased granularity and complexity of RBC computations have inevitably increased the demand for technical expertise, especially in the areas of realistic valuation of assets and liabilities, stress testing and the calculations for the various components within RBC. For example, insurers without access to in-house actuarial expertise have engaged external consultants to assist in the technical aspects of the RBC requirements. This is expected to further enhance insurers' technical competency through knowledge from such engagements. Furthermore, the increased proficiency of insurers in areas such as financial modelling will also support more effective risk management by enabling insurers to better anticipate emerging risks and to respond pre-emptively. Arising from the RBC requirements and the resulting increase in interaction with technical experts, insurers now recognise the need for developing such expertise internally or by obtaining the required support from group resources or external consultants.

The implementation of RBC is expected to further raise the overall level of resilience of Malaysian insurers, as the industry players continue to optimise their risk profiles and capital positions over the near future. The improvement in the quality and depth of statutory reporting brought on by RBC has also enhanced Bank Negara Malaysia's supervisory capabilities by providing an additional tool to identify problem areas early. Finally, the current market turmoil has also highlighted the need for a highly robust prudential framework that is supportive of strong capital adequacy, liquidity positions and risk management practices of insurers during periods of stress, while reducing the procyclical effects of regulation through economic cycles. To achieve this, the Bank is continuously reviewing and recalibrating the methodologies and parameters within RBC, to ensure that they remain relevant and appropriate at all times.

current issues in governance delivered by leading experts in their respective fields. Collectively, these channels support a continuous learning environment in which directors can receive regular updates and access information from a variety of resources on developments in governance practices and current issues in governance. A total of 180 directors of financial institutions will undergo FIDE training in 2009. In the short period since its launch, FIDE has also separately featured a number of notable speakers of international repute to address directors of financial institutions, with several more lined up throughout the year. Further information on FIDE can be obtained on its website at www.fide.org.my.

The Bank also finalised the revised standards on fit and proper requirements for boards and senior management of financial institutions. The revised requirements will clarify the Bank's expectations regarding institution's responsibilities to implement an ongoing internal process for assessing and confirming the suitability of individuals assigned to key functionary roles within the organisation. It also provides further elaboration on the fit and proper criteria that such individuals would be held to.

Risk management

Building on the various guidelines relating to risk management implemented for banking institutions and insurers, the Bank initiated an exercise to consolidate and rationalise these existing standards into a cohesive framework that would: (i) ensure consistent expectations and treatment of similar risks across business activities and financial sectors; (ii) enhance the clarity and logical structure of the regulatory framework; and (iii) promote greater convergence between, and the mutual reinforcement of, the regulatory framework and supervisory assessments. As part of this initiative, the Bank will undertake a comprehensive review and enhancement of its existing prudential guidelines and supervisory expectations relating to the key control functions that must exist and operate effectively within financial institutions in order to provide effective oversight of an institution's risk-taking activities. This encompasses the board and senior management, risk management, internal audit, compliance and management information system (MIS) functions. The resulting prudential framework will form the overarching guidelines and the foundation for the development of more specific guidance on the management of market, credit, liquidity, operational and insurance risks. The framework is intended to achieve a more consistent reflection of the Bank's approach to supervisory assessments of the risk profile of individual institutions, hence providing a common frame of reference for more constructive supervisory interactions with individual institutions on risk issues.

During the year, the Bank consulted the industry on standards relating to the risk management function, and issued guiding principles on data management and MIS frameworks. While varied practices and levels of sophistication have been observed in terms of approaches to structuring risk management functions by financial institutions, feedback received to the standards released by the Bank indicate a sharpened focus among financial institutions on the organisation of the risk management function and increased attention by the board and senior management in the oversight of risk management within institutions. This has been evidenced by the adoption of more formal governance structures and accountabilities for risk management activities within financial institutions. At the industry level, the associations of banks and insurers have also taken a more active role in promoting best risk management practices among industry members through dialogues and seminars organised on risk issues and developments. In the course of 2009, more specific guidance addressing the Bank's expectations in relation to the management of credit, market, operational and insurance risks will be issued for industry feedback.

The increasing intensity of liquidity pressures faced by financial institutions internationally towards the latter part of 2008 crystallised the Bank's own focus on planned enhancements to the Liquidity Framework imposed on the banking institutions. While liquidity was not a major concern domestically and a robust measurement framework for liquidity risk has been in place since 1998, accelerated efforts at the international level to establish sound liquidity risk management practices expedited the Bank's planned reforms to improve liquidity risk management practices within banking institutions. The proposed improvements will raise the baseline compliance requirements with respect to liquidity mismatches, and introduce more detailed guidance on sound liquidity risk management practices taking into account lessons learnt from the crisis. Focus will also be given to addressing liquidity issues arising from the longer-term structural changes in the banking system, including the growing importance of Islamic banking and the emergence of financial groups which introduces additional complexities to the management of liquidity risk. This is discussed in further detail in the box article "Liquidity Risk Supervision and Challenges in Liquidity Risk Management".

Proposed improvements to the Liquidity Framework will raise the baseline compliance requirements with respect to liquidity mismatches, and introduce more detailed guidance on sound liquidity risk management practices

Financial reporting standards

In August 2008, Malaysia announced a policy of convergence with the IFRS by 2012. Such a policy is consistent with the Bank's own interests in improving the transparency and comparability of financial statements, thereby further enhancing market discipline over financial institutions. With the implementation of the RBC Framework for insurers on 1 January 2009, prudential standards on valuation were changed to adopt elements of FRS 139: Recognition and Measurement of Financial Instruments which will come into effect in Malaysia on 1 January 2010. Insurers therefore followed an earlier move by banks to partially pre-adopt the requirements of FRS 139. The Bank is in the process of finalising the remaining required changes to the prudential framework for banking institutions to achieve full alignment with FRS 139. These changes relate to standards for the impairment of loans and the application of the fair value option, which were areas reserved under existing prudential rules pending the development of the requisite capacity by banking institutions to ensure the integrity of the financial statements.

While convergence between financial reporting and prudential objectives is desirable, it is widely acknowledged that there will be some areas in which divergence may be inevitable. One such area which has drawn considerable international attention during this crisis relates to the adoption of counter-cyclical provisioning policies, supported by regulators for prudential reasons but restricted under financial reporting standards. Changes to the fair valuation of liabilities owing to a deterioration in an institution's own creditworthiness has also been contentious among the regulatory community which is concerned with the effects of the accounting value of liabilities being reduced and resulting gains being recognised by financial institutions. While the Bank generally supports the use of fair values to provide decision-useful financial information for key stakeholders of financial institutions, the financial turmoil underscores the importance of preconditions that must be met for the wider use of fair values to achieve this objective.

The financial turmoil underscores the importance of preconditions that must be met for the wider use of fair values

The preconditions include the development and continued existence of active markets for instruments which are marked-to-market and robust systems and procedures instituted within financial institutions to support sound analyses and the exercise of expert judgment by management regarding fair values. With regard to loan impairments specifically, the Bank will be issuing a set of supervisory expectations outlining key capabilities to be met by banking institutions before adopting FRS 139. These will address the effective oversight of the credit risk assessment process, loan loss identification as well as expectations concerning sound provisioning methodologies. Banking institutions would be required to undertake an internal assessment and demonstrate that they have met the specified expectations prior to the adoption of FRS 139.

Where the preconditions for the application of fair values are not adequately met, the Bank retains the ability to use prudential filters (regulatory prescriptions that do not change the current year financial results) to protect reserves and ensure that financial institutions remain sound. During the year, the Bank also held discussions with various stakeholders in the financial reporting community to consider appropriate adjustments to the financial reporting framework to provide flexibility for the Bank to modify accounting standards applicable to financial institutions where necessary to preserve confidence in, and the integrity of, the financial system.

In response to the exceptional market conditions faced by banking institutions in the second half of 2008, the Bank allowed temporary flexibility for banking institutions to reclassify non-derivative financial assets out of the held-for-trading category from July 2008 until the end of 2009. This move was in line with similar changes announced by the International Accounting Standards Board and served to cushion the impact of extreme market movements which did not reflect the true underlying values of financial assets held by banking institutions. Similar flexibility was also granted to the insurance industry from 1 January 2009 until end-2009.

In August 2008, changes were also made to the operational requirements applicable to the restructuring and rescheduling of credit facilities to facilitate efforts by banking institutions to proactively manage and assist borrowers experiencing temporary financial strains. Specifically, regulatory processes and the parameters for the classification of rescheduled and restructured loans were simplified to facilitate the more efficient administration of these facilities by banking institutions. The flexibilities introduced were accompanied by strengthened expectations of the board of directors to develop clear and comprehensive policies on the classification and provisioning for rescheduled and restructured loans, and implement effective internal controls to avoid the 'ever-greening' of loans. These policies and controls are reviewed as part of the Bank's ongoing supervisory assessments.

Islamic finance and development financial institutions (DFIs)

During the year, the Bank intensified efforts to put in place a sound supporting regulatory framework for the international currency business activities of institutions licensed under the Malaysia International Islamic Financial Centre (MIFC) agenda to conduct international banking and takaful business. The regulatory framework governing these activities is broadly consistent with the main tenets of the prudential framework applicable to domestic business activities and establishes, among others, prudential standards and expectations in relation to capital adequacy, risk management, liquidity, single exposure limits, governance, and the offering of new products and services. It also elaborates the application of the risk-based supervisory framework (RBSF) to these institutions.

Regulatory efforts have also focused on strengthening the institutional resilience of DFIs to withstand shocks in this more challenging environment and to ensure they continue to be sustainable to meet their mandated roles. This has culminated in progressive improvements observed in the management and oversight of DFIs, most notably in the area of corporate governance. The boards of DFIs have been substantially strengthened to achieve a balanced mix of members with the necessary skill sets, expertise and experience to support more effective oversight, while management changes have provided stronger leadership to drive the execution of strategies and implementation of a clear policy framework that support the mandated roles of DFIs.

An important regulatory development during the year was the introduction of the Capital Framework for DFIs in February 2008. The framework appropriately supports the specific nature of DFIs' mandates and operations, while allowing DFIs to leverage prudently on their capital positions. This is reinforced by a specific requirement for DFIs to transfer a certain percentage of net profits to reserve funds when the risk-weighted capital ratio (RWCR) falls below a certain threshold specified by the Bank. In July 2008, approval was given for a DFI to participate in the interbank market, after fulfilling minimum requirements specified by the Bank. This will further enhance the role of DFIs in the economy by facilitating the more efficient management of liquidity and funding requirements.

SUPERVISORY ASSESSMENT

The Bank's supervisory activities in 2008 were substantially directed by unfolding events related to the global financial crisis. As conditions remained highly uncertain throughout the year, engagements with senior management and boards of financial institutions were intensified to monitor and assess developments affecting individual institutions as well as the industry at large, and to communicate supervisory concerns in connection with the Bank's ongoing supervisory assessments and macro-surveillance activities. Close communications with chief executive officers, chief risk officers and heads of treasury of financial institutions, in particular, were maintained to obtain timely intelligence on market developments and how the institutions may be affected.

While the direct impact of the global financial turmoil on domestic financial institutions has been limited, the Bank maintained a heightened state of alert to the secondary effects of the financial crisis on the positions of financial institutions which had become more pronounced. This served to sharpen the focus of supervisory assessments during the year in specific areas, as outlined in Table 3.2.

Overall, risk exposures remained well-contained within the capacity of the financial system to absorb a further deterioration in global economic and financial conditions. Nonetheless, the severe impact and reach of the crisis renewed the Bank's focus on the prompt identification of emerging concerns within financial institutions. Significant attention was directed at improving the robustness of stress testing by financial institutions to incorporate scenarios under both plausible and extreme conditions.

Overall, risk exposures remained well contained within the capacity of the financial system to absorb a further deterioration in global economic and financial conditions

This was complemented by stress tests independently performed by the Bank to gauge the impact of calibrated shocks applied generally to the significant business activities of financial institutions, and more specific shocks applied to trading activities, off-balance sheet activities and liquidity positions. Identified vulnerabilities were discussed with the affected institutions and specific actions were taken, mainly through improvements to internal risk management practices, to shore up the resilience of these institutions. A detailed outcome of supervisory assessments is covered in the chapter "Risk Assessment of the Financial System".

Through its supervisory activities, the Bank has observed a general strengthening of risk management systems among licensed financial institutions. More specifically, there has been a heightened appreciation by the board and senior management of the primary risk drivers affecting their institution's risk profiles, thus supporting a more informed and proactive risk culture and more effective enterprise-wide risk management practices. This has translated into significant enhancements made in recent periods to the risk management capabilities of financial institutions through: (i) increased investments in more advanced credit assessment and portfolio management tools; (ii) better monitoring capabilities to support a more proactive approach to the management of problematic loans; (iii) improvements in risk management processes and structures for market and liquidity risk, and assessments and control of risk at a more granular level by independent risk management functions; and (iv) more proactive capital management by financial institutions in setting and maintaining internal capital levels that are well above the regulatory minimum, and in pursuing more efficient capital structures. Notable improvements observed in information flows and content have had an important role in driving this process.

Operational risk management practices have also seen substantial improvements. Noteworthy is a more pronounced move away from the silo management of operational risk focusing separately on fraud, data processing and IT security, towards greater integration of operational risk management strategies with firm-wide risk management systems and processes. More institutions have also acted to formalise governance and reporting structures for operational risk management functions, and increased related investments to develop the requisite expertise to support this function. This reflects an enhanced appreciation by the boards and senior management of the significance of operational risk, which has to date been largely overlooked among institutions relative to other risks. The increased focus on operational risk

Table 3.2
Specific Areas of Supervisory Focus

1. Credit Exposures	i) Significant lending portfolios of financial institutions such as retail, SME and corporate loans ii) Sectoral analysis (e.g. residential property, construction, energy and transportation sectors) iii) Counterparty risks of interbank lending and borrowing and reinsurance exposures iv) Exposures to borrowers in specific jurisdictions v) Large borrowers, restructured and rescheduled borrowers and watchlist accounts vi) Monitoring of loan growth and access to financing indicators
2. Market Risk	i) Equity market volatility monitoring with specific stress tests and scenario analysis conducted to assess impact under extreme case scenarios ii) Monitoring of foreign currency volatility against Malaysian ringgit and impact on institutional profitability iii) Monitoring of market volatility in debt securities market and impact on institutional holdings of debt securities
3. Liquidity	i) Monitoring of wholesale deposit profile and interbank activities to assess reliance on interbank markets, concentration of deposits and liquidity mismatches ii) Contingent liquidity exposures related to off-balance sheet activities iii) Monitoring of insurers' liquidity needs, arising from potential increases in surrenders
4. Capital Adequacy	i) Potential impact on capital from exposures to vulnerable economic sectors, deterioration in portfolio asset quality, earnings deterioration and losses from trading or mark-to-market exposures ii) Ability of institutions to redeem maturing instruments and replace/raise new capital in the current economic climate and potential costs involved iii) Potential capital support required from overseas operations iv) Robustness of internal capital adequacy ratios and capital management plans of insurers

has been further reinforced by the creation of a Technology Risk Specialist function to complement the Operational Risk Specialist function within the Bank to support more in-depth and integrated supervisory assessments of operational risk.

The implementation of PIDM's Differential Premium System (DPS) with effect from May 2008 further strengthened incentives for the adoption of sound risk management practices by banking institutions that are members of the deposit insurance system. Under the DPS, premium rates paid by member institutions are determined in reference to an assessment of the risk profile of the institution based on specified assessment criteria, which includes a substantial weightage accorded to the Bank's supervisory assessment of a banking institution. The operationalisation of the DPS has also promoted more rigorous exchange of information between PIDM and the Bank on the financial environment and institutional developments, thereby enriching both agencies' ongoing surveillance activities. These developments place Malaysia's financial institutions in a sound position to ride out the significantly more challenging environment that is expected to persist in 2009.

The global financial turmoil has brought to the forefront the importance of effective supervisory cooperation and coordination in averting threats to financial stability. The Bank has long supported this agenda, having established and continuously improved cooperative frameworks domestically with PIDM and the Securities Commission, and played an active role in spearheading regional cooperation arrangements through the Monetary and Financial Stability Committee of the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) and the South East Asian Central Banks (SEACEN). During the year, cross-border collaborative efforts were also extended bilaterally among the regional authorities to support the effective consolidated supervision of regionally active banks.

PRIORITIES MOVING FORWARD

To support the Bank's continued effectiveness in discharging its mandate for financial stability in light of the changing economic and financial landscape, significantly expanded provisions on financial stability were included in the proposed Central Bank of Malaysia Act. The scale and extent of global actions taken to contain the financial crisis have highlighted the critical importance of articulating a well-defined mandate for financial stability and legal framework for the prevention, management and resolution of financial crises.

Given the continuing stresses on the global financial system, and a widespread expectation of a sharp slowdown in global growth, the Bank's prudential regulatory and supervisory priorities will remain focused on four fronts. These are: (i) ensuring the effective functioning of the financial intermediation process which is critical to support growth during this challenging period; (ii) ensuring the Bank's and financial institutions' responsiveness to risks through ongoing enhancements to the prudential and legislative framework and heightened supervision; (iii) enhancing the use of both micro- and macro-level regulatory tools to lean against financial excesses and the build-up of systemic risks; and (iv) developing more robust systems and arrangements for detecting and addressing any emerging stresses in the financial system. A comprehensive and integrated plan for 2009 is now in place to support these priorities.

At the same time, the continuing evolution of the financial system in Malaysia will require commensurate attention to be devoted towards putting in place a sound regulatory framework to support the orderly growth of new financial activities and products. As these activities gather further momentum, the corresponding prudential focus and supervisory attention will have to increase proportionately to preserve the integrity and stability of the financial system. The Bank envisages work in this area to be primarily directed towards addressing the risks associated with new financial innovations while supporting the continuing development of sound governance and risk management practices within the financial sector.

Payment Systems Report

Payment and Settlement Systems

Payment and Settlement Systems

As the global financial crisis deteriorated, the resilience and capacity of payment and settlement systems were truly tested in the face of record high transaction volumes. All payment and settlement systems during the year operated smoothly even as the global financial markets experienced liquidity shortages, high volatility and uncertainty. Indeed, the critical importance that central banks have placed on ensuring the smooth and reliable functioning of payment and settlement systems has paid off. The failure of any payment and settlement system during a crisis would magnify its severity and undermine public confidence. Hence, a resilient and well-functioning payment and settlement system remains critical towards maintaining monetary and financial stability.

A resilient and well-functioning payment and settlement system remains critical towards maintaining monetary and financial stability

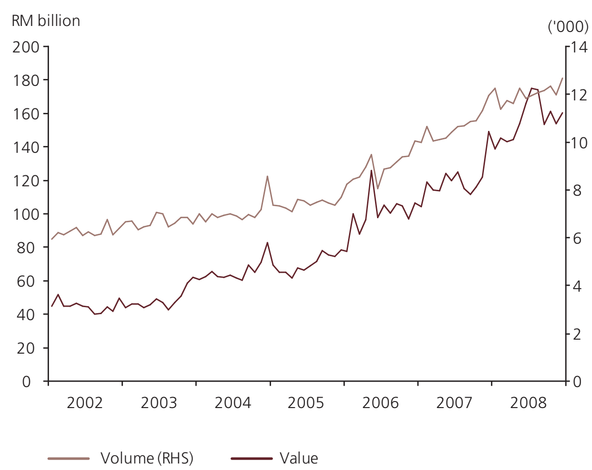
Against this backdrop, the Bank's focus in 2008 remained on ensuring the safety and stability of the major payment and settlement systems. In addition, efforts were also directed towards consumer protection and preserving confidence. At the same time, recognising the significant efficiency gains that electronic payments (e-payments) can offer, the Bank continued to pursue its agenda of migration to e-payments.

SAFETY AND STABILITY

The RENTAS (Real-time Electronic Transfer of Funds and Securities) system, a systemically important payment system (SIPS) by virtue of the large values of payments that are settled through the system, is a critical financial infrastructure in the country. Its systemic importance is also reflected in the close interconnection of financial institutions through the RENTAS system. Guided by this, the safety, stability and resilience of the RENTAS system have been enhanced over the years. These include establishing the cross-border Payment versus Payment (PvP) link between the Malaysian and Hong Kong systems to mitigate foreign exchange settlement risk, strengthening business continuity to ensure uninterrupted availability of the RENTAS system and reinforcing the Bank's oversight responsibilities by segregating these duties from its role as operator of RENTAS. The Bank also places great importance in ensuring that the features and operation of RENTAS are in line with international best practices, such as the Core Principles for SIPS as issued by the Bank for International Settlements (BIS) Committee on Payment and Settlement Systems. The continuous efforts to enhance RENTAS have resulted in a system that is safe and resilient with minimal operational disruption, settling more than 90% of total non-cash payments in the country.

In 2008, the RENTAS system settled 3 million transactions amounting to RM38.7 trillion, an increase of 29.7% in transaction value from the preceding year, which represents more than 50 times Malaysia's gross domestic product (GDP). On average, RENTAS processed approximately 12,000 transactions per day with an average daily value of RM156 billion. The daily average turnover of RENTAS continued to expand in 2008, registering an annual growth of 30.7%. At its peak, RENTAS processed 17,508 transactions within a day with a total value of RM195.2 billion.

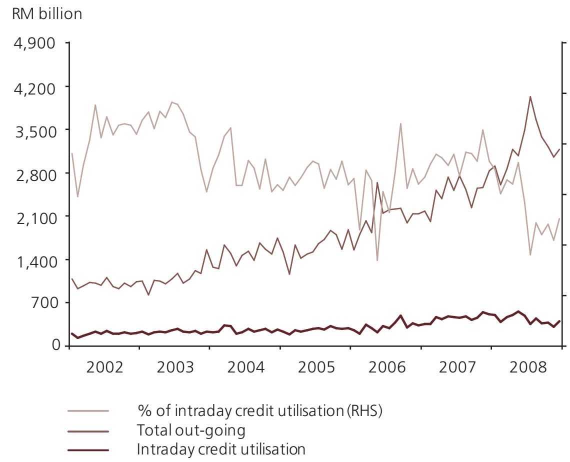
Chart 4.1
Daily Average by Value and Volume



Despite higher volatility in the financial markets, RENTAS remained resilient and continued to operate smoothly throughout 2008. There were no counterparty credit concerns as the global developments did not have any impact on participants' ability to meet payment obligations. Furthermore, the RENTAS system settles each payment individually on a gross basis as each payment order enters the system on a real-time basis. This minimises interbank credit exposure during the day which eliminates settlement risks. The intraday credit facility that is made available to all system participants minimises the incidence of payment gridlock, thus maintaining a smooth flow of payments within the RENTAS system. Although there was an increase in transaction value settled through RENTAS during the year, there was no significant increase in the utilisation of intraday credit. Only approximately RM5.2 trillion or 13.6% of RENTAS transactions in 2008 were completed utilising the intraday credit facility, a decline of 5% compared to the previous year. This can be attributed to the ample liquidity in the financial system.

Despite higher volatility in the financial markets, RENTAS remained resilient and continued to operate smoothly throughout 2008

Chart 4.2
Intraday Credit Usage



Foreign Exchange Settlement Risk

The volume and value of foreign exchange (FX) trades have increased each year. In 2008, the daily FX trades amounted to an average of RM13.4 billion, an increase of 53.2% over the previous year. As the amounts involved in FX settlements are large, the settlement risk and the banks' exposure can be substantial. By virtue that 69% of ringgit trades are against the US dollar and that ringgit is not an eligible currency to be settled via CLS Bank International, which provides multi-currency settlement for FX transactions; a direct link between RENTAS in Malaysia and the USD Clearing House Automated Transfer System (USD CHATS) system in Hong Kong was established in November 2006 to mitigate the settlement risk for ringgit and US dollar FX transactions. This link is a PvP infrastructure which allows for the simultaneous settlement of ringgit in Malaysia and US dollar in Hong Kong during Malaysian business hours.

Since the link was established, transactions settled via the link have grown strongly. At the end of 2008, there were 24 banks that utilise the PvP link to reduce their FX settlement risk, compared to 16 banks when it was first introduced. On a daily basis, an average of RM8.3 billion was settled via the link in 2008. This represents an increase of 59% compared to the previous year. For the whole of 2008, a total of RM2.1 trillion of FX trades were settled through the PvP link, accounting for 62% of total FX trades, resulting in a significant reduction in FX settlement risk of ringgit-US dollar trades.

Resilience

Given the systemic significance of the RENTAS system, safeguarding the resilience and uninterrupted availability of the system remained a high priority of the Bank, especially in times of market uncertainty. No major disruptions were encountered during the year and RENTAS achieved 99.9% system availability. In March 2008, the Bank rolled out the second level back-up facility to participating members to avoid operational disruptions in the event that both the production and disaster recovery sites of members fail. The RENTAS System Participation and Operation Rules were also amended, requiring members to incorporate business continuity management plans for RENTAS operations, as the resilience of the system itself is dependent on its members' resilience. Scheduled monthly live-runs continued to be conducted from the RENTAS

Disaster Recovery Centre (DRC) to test the state of readiness of the DRC in times of crisis. The contingency testing by member institutions were also monitored closely to ensure that their respective DRCs are readily available and operational in times of crisis.

Given the systemic significance of the RENTAS system, safeguarding the resilience and uninterrupted availability of the system remained a high priority of the Bank

Oversight Governance

Another fundamental component in promoting safety and stability is the oversight responsibilities of the Bank over payment and settlement systems. Similar with most other central banks, the Bank is also the operator of the RENTAS system, on account of its systemic importance towards maintaining financial stability. In line with best practices and the BIS recommendations, the Bank reviewed the organisational responsibility with respect to the oversight of RENTAS with a view to segregate it from the operational responsibility. Following the review, the Bank established a payment subsidiary known as the Malaysian Electronic Clearing Corporation Sdn. Bhd. (MyClear) in October 2008. Its establishment reinforces the Bank's oversight responsibilities and supports more effective surveillance, independent assessment, evaluation and monitoring of the different types of risk on the major payment systems. MyClear's responsibility is to operate RENTAS and the Cheque Truncation and Conversion System (eSPICK), and to spearhead the migration to e-payments agenda of the Bank. This will be achieved through strategic alliances with various stakeholders and the industry as a whole. As both RENTAS and eSPICK are widely used and critical to the smooth functioning of the economy, both systems have been designated as Designated Payment Systems pursuant to Section 6 of the Payment Systems Act 2003.

Retail Payment Systems and Payment Instruments

In the area of retail payments, the Bank's focus is on preserving public confidence in the use of retail payment systems and instruments as well as establishing adequate consumer safeguards. In this regard, the Bank's oversight activities are directed at the two major retail payment system operators, the Malaysian Electronic Payment System (1997) Sdn. Bhd. (MEPS) and Touch 'n Go Sdn. Bhd. (TnG), to ensure the robustness and reliability of their systems. During the year, MEPS, which operates the Shared ATM Network, domestic PIN-based ATM card, Interbank GIRO (IBG) and the Financial Process Exchange (FPX), processed approximately 197 million transactions amounting to RM135 billion; whereas TnG, the system operator and issuer of the Touch 'n Go prepaid cards, processed over 540 million transactions amounting to RM1.6 billion. While disruptions to these systems may not have systemic implications, the impact would be widespread inconvenience in view of the significant volume of transactions that are processed by these two systems. If the disruptions are prolonged,

The establishment of MyClear reinforces the Bank's oversight responsibilities and supports more effective surveillance, independent assessment, evaluation and monitoring of the different types of risk on the major payment systems

the retail, transport and e-commerce sectors would be adversely affected, thus eroding public confidence in the use of such systems and curtailing the migration to e-payments. As such, both MEPS and TnG were required to undertake a self-assessment on their compliance with the relevant principles of the BIS Core Principles for SIPS in 2008. The purpose of the assessment was to identify possible gaps and risks in the systems and operations of MEPS and TnG to ensure their security, reliability and robustness. While the Core Principles were specifically drawn up for SIPS, certain principles on the management of legal, financial and operational risks are relevant and applicable to retail payment systems. To complement these principles, the Bank is working towards developing its own standards for retail payment systems to address settlement risks, resilience to major operational disruptions, governance issues and risk management procedures and controls.

Fraud Risk in Retail Payments

Over the years, the Bank has collaborated with industry players and relevant authorities to proactively combat fraud in payment systems. Measures that have been implemented to sustain public confidence in the use of electronic payments include the migration from magnetic stripe to chip-based ATM cards, the migration to the Europay-MasterCard-Visa (EMV) standard for credit cards and the introduction of additional security measures for Internet banking. As a result of these efforts, payment system fraud and attempted fraud rates in the country have been sustained at negligible levels. In 2008, fraud losses accounted for only 0.001% of total non-cash transactions during the year.

Credit card fraud remained negligible in 2008. The losses continued to be insignificant, accounting for less than 0.04% of total credit card transactions during the year. More than 59% of total credit card fraud losses during the year were attributed to card-not-present (CNP) transactions which do not require the presence of physical cards, whilst "lost and stolen" incidences accounted for 24% of total credit card fraud losses. As the modality of card fraud in Malaysia is similar to trends observed globally, concerted efforts to counter such fraud are being undertaken by the industry and the international card brand owners. Efforts are focused on two main areas, namely, enhancing the protection of card data and improving the identification and authentication techniques adopted.

Chart 4.3
Credit Card Fraud

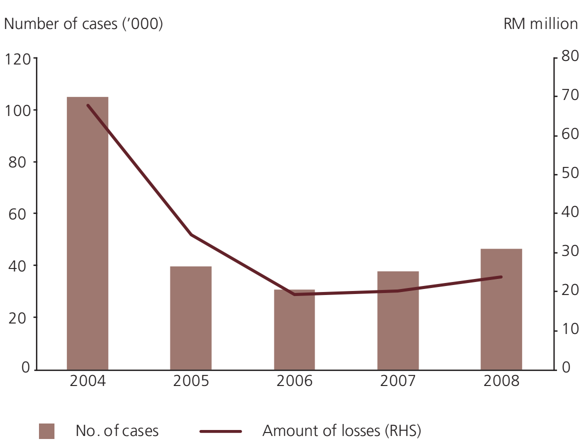
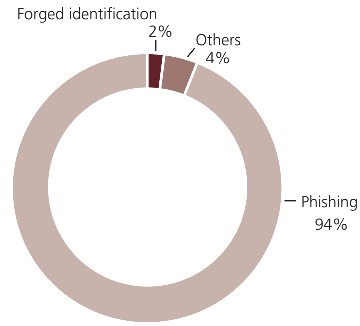


Chart 4.4
Internet Banking Fraud Cases in 2008



Losses emanating from Internet banking fraud were also insignificant, accounting for only 0.00002% of the total value transacted via the Internet banking channel in 2008. Consistent with global trends, phishing remained the main threat to the Internet banking industry in Malaysia, accounting for 94% of Internet banking fraud cases reported. Phishing involves the sending of fake e-mail or text messages to lure recipients into divulging login credentials such as personal identification numbers (PINs), passwords, and second authentication factors such as token-generated-PINs or transaction authorisation codes (TAC).

Continuous efforts are being undertaken by the Bank and the industry to address Internet banking fraud. The Internet Banking Taskforce (IBTF), which is represented by the industry players, Suruhanjaya Komunikasi dan Multimedia Malaysia (SKMM), Cyber Security Malaysia and the Bank, keeps a close watch on developments including regularly assessing potential threats and proposing measures to combat these threats. In addition, banks implemented measures to enhance consumer awareness of common fraud tactics and the importance of keeping customer information confidential. Preventive measures taken by customers themselves are important as a first line of defence against such frauds.

MIGRATION TO ELECTRONIC PAYMENTS

Alongside the critical importance of ensuring the safety and stability of the payment and settlement systems, enhancing efficiency in the provision of payment services is also an important consideration. Efficiency in this context entails the settlement of payments in a fast and secure manner at low cost. E-payment systems, riding on the efficiency of electronic technologies, have proven to cost significantly less than paper-based systems. Hence, the widespread adoption of e-payments will pave the way towards the development of a more efficient payment system which would ultimately improve the competitiveness of the economy. An implementation strategy in promoting the greater use of e-payments is the engagement of the Government to champion the nation's migration to e-payments. This is also in line with the Government's objective to enhance the efficiency of the public delivery system.

Widespread adoption of e-payments will pave the way towards the development of a more efficient payment system which would ultimately improve the competitiveness of the economy

The Government Sector

Close collaboration with the Government sector has resulted in major achievements in the adoption of e-payments by the Government agencies. About 95% of the volume of payments made by the Government are now conducted using electronic channels. With this achievement, the Bank's focus shifted to promoting the use of e-payments for Government collections, working closely with the Ministry of Finance, the Accountant General, and the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU). The Bank also participated actively in the Special Taskforce to Facilitate Business (PEMUDAH) sub-committee for Streamlining E-Payment Implementation in the Public Sector chaired by the Secretary General of Treasury, which was established to expedite the implementation and adoption of e-payments in the public sector. As a result of these efforts, there were 89 Government agencies offering 148 online payment services as at end-2008. For example, the adoption of e-payments has enabled a local council to reap cost savings. In less than a year of providing online payment services on the Internet, the number of visits to its counters had reduced by half from 22,535 to 11,066. This has led to the reduction in the number of counters from 20 to 12 and in the number of counter staff from 21 to 15.

The increased accessibility and flexibility to choose between multiple delivery channels have improved the convenience and ability of the public at large to interact and submit payments to Government agencies. Payment channels now include counter services accepting debit and credit cards, the Malaysian Government's official Internet portal,

Chart 4.5
Trend of Government Payments by Volume

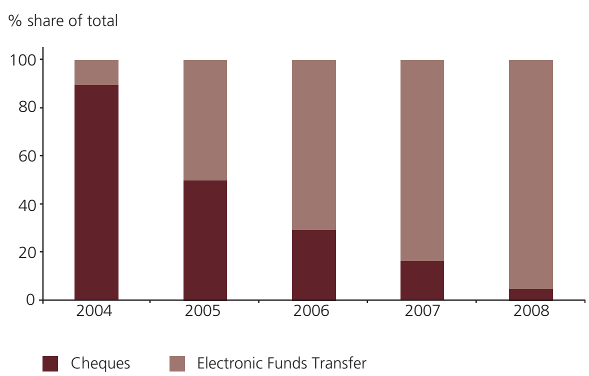
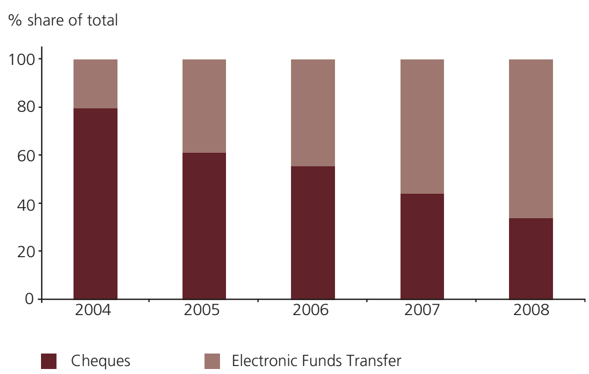


Chart 4.6
Trend of Goverment Payments by Value



Internet banking and automated teller machines (ATMs) or kiosks. Supported by a public awareness campaign under the "myBayar" banner, which was created to promote Government online payments, the offering of online payment services by Government agencies and their widespread usage is expected to increase further in the course of 2009.

During the last five months of 2008, more than 600,000 payment transactions valued at RM300 million made to the Government agencies were performed using payment cards. In addition, the use of the direct debit facility through the FPX system has increased, with more than 75,000 transactions valued at about RM21.9 million in 2008 as compared to 19,000 transactions valued at RM6.7 million in 2007.

The Insurance and Securities Sectors

Apart from the Government sector, the Bank has been strongly advocating the higher usage of e-payments in the insurance and securities industries and has initiated and coordinated efforts with the relevant stakeholders to achieve this. In the insurance industry, several insurance companies have since embarked on replacing cheques with direct credit payments to their adjusters, repairers and brokers. The provision of payment reference information for reconciliation purposes and the validation of the beneficiary's identity in addition to bank account number to eliminate the risk of wrongful crediting were critical to the adoption by the insurance companies. To facilitate payment of premiums by policyholders, some insurance companies have leveraged on Internet banking to enable payments for a wider range of insurance products. Following this, the number of insurance premium payments through Internet banking has increased by 28.1% to 914,294 transactions in 2008. The collection of insurance premiums using the direct debit service of the FPX system has also increased significantly accounting for more than one-third of the FPX transaction volume in 2008.

As for the securities industry, the Bank has been working with Bursa Malaysia and the Securities Commission to migrate public-listed companies to electronic channels for dividend payments (e-Dividend) to replace the existing practice of issuing dividend cheques. This would significantly accelerate the adoption of e-payments in the securities industry and boost the industry's efficiency considering that dividend payment amounted to over RM20 billion annually in the past three years. The review of the dividend payment process was initiated during the year and various payment models leveraging on electronic channels were considered by the National Payments Advisory Council (NPAC). In addition, the required infrastructure enhancement to support this initiative will also facilitate payments via electronic channels for other corporate transactions such as capital repayment. The implementation of e-payments for the sale and purchase of shares via direct debiting of banking accounts and auto-crediting of sales proceeds to retail investors via their banking accounts is also being studied, with a working group comprising members from the Bank, the Securities Commission, Bursa Malaysia, the Association of Banks in Malaysia and the Association of Stockbroking Companies Malaysia established to take this forward.

Trends in Migration to Electronic Payments

The continuous shift from paper-based payments to electronic form is evident from the rising trend in the number and share of e-payment transactions recorded in 2008. The motivating force for this upward trend is the consumer demand for fast, convenient and secure transactions, as well as the merchants' efforts in improving business processes and lowering costs to enhance profitability and competitiveness. Over time, there has been an increasing awareness of the various costs that add up at each stage of the cash handling process, including 'hidden' costs that are borne by merchants. This has made e-payments a more attractive option.

Usage of Cash and Cheques

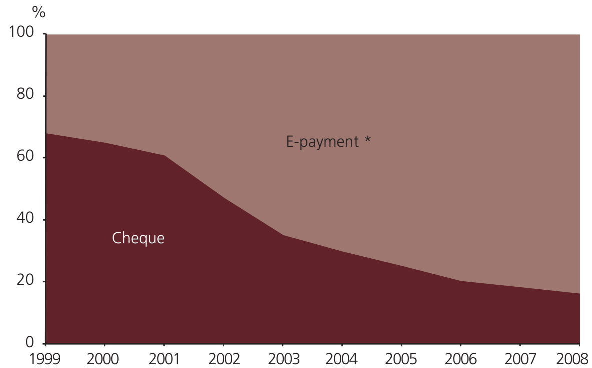
Cash payments remain popular although the role of cash in the Malaysian economy has declined gradually over the years, as indicated in the decline in the cash in circulation (CIC)-to-GDP ratio. The average value of ATM withdrawals, which had been on an increasing trend from RM400 in 2003 to RM461 in 2006, has remained fairly constant at around RM460 in 2007 and 2008. This is also supported by the rising trend observed in the ratio of e-payments-to-GDP. Similarly, while cheques remain a popular payment method, accounting for approximately 90% of total non-cash retail payments value in 2008, its ratio to GDP has declined significantly from 334.9% in 1998 to 237.8% in 2008. The number of cheques written

Table 4.1
Cash Holdings and Non-Cash Transactions

	2004	2005	2006	2007	2008
CIC per capita (RM)	1,106.6	1,144.0	1,245.6	1,320.5	1,443.1
CIC-to-GDP (%)	6.0	5.8	5.8	5.6	5.5
Number of cheques issued per capita	7.7	7.6	7.5	7.7	7.4
Number of e-payment* transactions per capita	18.1	22.3	29.0	33.9	37.6
Average value of ATM withdrawals (RM)	407.2	428.1	460.9	463.3	459.1

* E-payment refers to credit card, charge card, debit card, e-money, IBG, FPX, ATM, internet banking, mobile banking and RENTAS third party transactions

Chart 4.7
Usage of Cheque and E-payment



* E-payment refers to credit card, charge card, debit card, e-money, IBG, FPX, ATM, internet banking, mobile banking and RENTAS third party transactions

has also declined whilst the value of cheques written per capita has only recorded a marginal increase of 0.7% in 2008 compared to a high growth of 16.5% in 2007.

Continued Shift to Payment Cards

Payment cards are still the most popular e-payment mode used in Malaysia with electronic money (e-money) recording the highest number of transactions and credit cards leading the way in terms of amount spent. The preference shown by consumers in using credit cards to make payments is mostly supported by its long-established presence in the payments industry. This is also evident from the large number of payment terminals available in the market (144,897 terminals as at end-2008), a reflection of the large number of merchants who accept this payment mode. However, as more types of payment cards are now available in the market, consumers have a wider array of payment card options to choose from to suit their spending pattern. At the same time, the e-money industry, which is still at its infancy stage, continued to gain popularity as a payment instrument for micro payments in Malaysia, representing more than half of non-cash transactions performed in the economy. In 2008, there were 684.9 million e-money transactions valued at RM2.1 billion, an increase of 11.7% and 25.6% respectively from the previous year, with the bulk of the transactions in the transportation sector.

Debit cards continued to register strong growth, with an increase of 73.5% in transaction amount in 2008, in line with the continued development of the point-of-sale infrastructure that had facilitated the increase in the number of retail locations that accept debit card payments. In this regard, the number of terminals that accept the domestic PIN-based ATM card, stood at 67,581 as at end-2008 compared to only 34,754 as at end-2007. Apart from increased accessibility, consumers are also realising the convenience of using debit cards to make payments, especially since there are no minimum qualification criteria to own a debit card and no fees and charges associated with it. With debit cards, consumers are essentially given an option to either withdraw the cash from the ATM or use the card to pay the merchants directly. Consequently, debit cards accord consumers with the convenience of a credit card without incurring finance charges and accumulating debt.

Increasing Popularity of the Internet Channel and Other Electronic Funds Transfer Systems

The Internet has revolutionised the way payments are made. Increasingly, more individuals and corporates in Malaysia have taken advantage of Internet banking services offered by financial institutions to perform their banking and payment transactions. Besides providing access 24 hours a day, seven days a week, Internet banking offers users the ease of undertaking transactions from virtually anywhere.

In 2008, Internet banking services continued to grow rapidly with the number of payments made

Table 4.2
Internet Banking Services

	2005	2006	2007	2008
Total value of transactions (RM billion)	**259.1**	**334.8**	**417.8**	**624.4**
Individual	**18.6**	**28.5**	**48.5**	**53.0**
Of which:				
Bill payments	1.2	2.7	3.7	3.7
Funds transfer	8.6	12.8	20.1	26.7
Card payments[1]	2.1	2.7	3.9	5.5
Investment in share and unit trust	4.7	5.9	13.9	10.2
Corporate	**240.5**	**306.3**	**369.4**	**571.4**
Of which:				
Salary payments	2.3	8.1	26.4	21.9
Funds transfer	105.4	165.1	305.7	491.2
Total volume[2] of transactions (million)	**21.6**	**33.5**	**62.6**	**84.9**
Individual	**18.6**	**27.7**	**40.3**	**57.0**
Of which:				
Bill payments	8.1	12.1	17.5	23.3
Funds transfer	6.1	9.8	13.3	20.7
Card payments[1]	2.3	3.2	4.5	6.2
Investment in share and unit trust	0.6	0.9	3.2	2.5
Corporate	**3.0**	**5.8**	**22.3**	**27.9**
Of which:				
Salary payments	0.7	1.6	13.7	13.1
Funds transfer	1.9	3.7	6.9	9.7

[1] Repayment of credit card and charge card outstanding balance
[2] Exclude non-financial transactions

Note: Numbers may not necessarily add up due to rounding

via this channel showing an increase of about 22.3 million or 57% to 84.9 million in 2008, while the value of transactions increased by RM206.6 billion or 49.4% to RM624.4 billion, mainly attributable to the increase in the value of transactions undertaken by corporate customers. During the year, the number of Internet banking subscribers has exceeded the number of Internet subscribers for the first time, registering a ratio of 100.8% as at end-2008 compared to 89.8% as at end-2007. The number of Internet banking subscribers vis-à-vis the population increased from 16.5% as at end-2007 to 21.6% as at end-2008. The strong growth in Internet banking is expected to continue in 2009 following the Government's myBayar initiative and the various promotional campaigns including desktop banking packages for corporate customers and small and medium enterprises.

The growth of Internet banking subscribers and services, coupled with active merchant recruitment programmes, particularly in the Government, insurance and retail sectors, have also contributed to the expansion in the usage of IBG and FPX. IBG transactions grew by 35.9% to 36.2 million in terms of volume and grew by 33.8% to RM89.6 billion in terms of value in 2008. Meanwhile, FPX transactions increased by 357.9% to 0.3 million in terms of volume and increased by 121.2% to RM1 billion in terms of value in 2008. The national agenda on the deployment of broadband services and programmes to promote the adoption of e-commerce would provide further impetus for the growth in Internet banking, IBG and FPX.

The Potential of Mobile Banking and Payments

Mobile banking subscribers have nearly doubled from 0.3 million as at end-2007 to 0.5 million as at end-2008 while its transaction value surged from RM21.2 million in 2007 to RM71.5 million in 2008. The encouraging growth was mainly attributed to the launch of mobile banking services by three additional banking institutions and new services offered such as interbank funds transfer and corporate bill payment services that enable businesses to make payments to their suppliers via the mobile phone. Payments made by corporates to their suppliers comprised 38.1% of the total transaction value followed by bill payments at 32.4% and funds transfer at 24%. The adoption of mobile payments has also grown, expanding by 197.4% and 163.8% in terms of volume and value respectively. The increase was due to the higher usage of mobile e-money and mobile debit applications, whereby customers are able to make payments using their mobile phones via a direct debit to their e-money and bank accounts. The high growth reflects increased consumer awareness of its convenience, supported by wider merchant acceptance that grew by 11% to 12,512 merchants as at end-2008. Although the mobile channel has yet to gain widespread adoption with about two subscribers per 100 inhabitants, the encouraging growth trend in the past three years is evidence of its potential to be one of the mainstream payment channels.

MOVING FORWARD

While notable progress has been recorded in the drive towards migrating to e-payments, the usage of cheques remains a popular payment mode. In Malaysia, the price distortion between paper-based payments and e-payments has in some way hindered the progress to e-payments. Price incentives need to be provided to the users of payment services if their payment habits are to be changed. Given the substantial costs of cheque processing and handling, it would not be cost-effective for the country to continue in its high adoption of cheques as a payment medium. Therefore, addressing the price distortion and having in place effective incentives to drive the migration to e-payments will be one of the main areas of focus moving forward. The efficiency of e-payment mechanisms would also be given emphasis to further increase the uptake by consumers. Further initiatives have been identified in the Electronic Payments Roadmap as priority areas, which include promoting an environment that is conducive for greater adoption of e-payments in financial transactions.

Annex

Contents

Key Financial and Payment Systems Statistics

Household Sector

Payment and Settlement Systems

Table A.1
Sources and Uses of Funds of the Financial System

	2004	2005	2006	2007	2008*p*
	RM million				
Sources of Funds					
Capital, reserves and profit	167,017.9	180,639.1	218,450.8	246,245.7	285,003.0
Currency	32,353.9	34,396.7	37,896.0	42,192.7	48,042.9
Demand deposits	124,333.4	135,944.1	165,166.1	166,128.4	175,103.4
Other deposits[1]	711,307.5	787,169.3	910,403.1	982,933.4	1,087,788.2
Banking and financial institutions	*197,022.6*	*227,173.6*	*319,550.6*	*312,240.1*	*341,564.7*
Public sector	*38,809.9*	*44,415.0*	*34,176.8*	*37,810.1*	*43,433.6*
Private sector	*462,149.5*	*501,873.3*	*544,589.0*	*616,863.7*	*681,873.6*
Foreign	*13,325.4*	*13,707.4*	*12,086.7*	*16,019.5*	*20,916.3*
Borrowings	52,607.9	55,955.8	96,094.2	81,022.8	72,601.6
Funds from other financial institutions	71,717.6	84,238.8	78,267.2	154,393.2	141,306.6
Domestic[2]	*33,762.8*	*43,150.4*	*45,784.2*	*100,138.1*	*90,076.2*
Foreign	*37,954.7*	*41,088.4*	*32,483.0*	*54,255.1*	*51,230.4*
Insurance, provident and pension funds	337,937.6	373,645.1	425,637.8	468,865.3	509,669.4
Other liabilities	267,579.3	260,673.7	226,362.6	333,615.8	260,123.4
Total Liabilities	**1,764,855.0**	**1,912,662.6**	**2,158,277.7**	**2,476,397.4**	**2,579,638.5**
Uses of Funds					
Currency	5,058.3	6,057.3	8,626.4	9,235.3	10,599.6
Deposits with other financial institutions	247,947.3	259,429.4	345,239.3	468,521.1	365,386.1
Domestic	*214,355.2*	*232,385.7*	*296,921.1*	*379,611.1*	*321,262.0*
Foreign	*33,592.0*	*27,043.7*	*48,318.2*	*88,910.0*	*44,124.0*
Loans and advances	655,668.4	721,642.2	784,425.9	864,470.9	969,127.7
Banking and financial institutions	*7,950.3*	*5,446.5*	*12,054.8*	*61,539.2*	*65,950.4*
Public sector	*24,382.2*	*22,449.5*	*55,863.5*	*11,993.1*	*16,370.7*
Private sector	*620,712.1*	*691,258.2*	*713,451.4*	*784,486.6*	*874,770.9*
Foreign	*2,623.8*	*2,488.1*	*3,056.3*	*6,452.0*	*12,035.7*
Securities	433,071.0	472,883.7	605,892.0	670,171.4	756,044.7
Treasury bills	*445.2*	*1,698.4*	*1,687.1*	*1,969.8*	*1,524.5*
Commercial bills	*8,403.7*	*7,078.7*	*6,250.2*	*10,912.4*	*13,224.0*
Malaysian Government Securities (MGS)	*139,488.3*	*153,654.3*	*174,424.5*	*202,055.1*	*234,598.1*
Corporate	*271,630.7*	*291,606.4*	*303,684.7*	*364,897.6*	*414,379.6*
Private Debt Securities (PDS)	*130,213.0*	*140,405.4*	*135,385.1*	*175,295.8*	*195,114.1*
Equities	*141,417.7*	*151,201.0*	*168,299.5*	*189,601.7*	*219,265.5*
Foreign	*4,578.6*	*6,677.9*	*7,399.2*	*5,221.3*	*6,165.2*
Others	*8,524.5*	*12,168.0*	*112,446.3*	*85,115.2*	*86,153.3*
Gold and forex reserves	247,786.6	263,235.6	288,921.8	334,410.9	315,753.2
Other assets[3]	175,323.5	189,414.3	125,172.3	129,587.7	162,727.2
Total Assets	**1,764,855.0**	**1,912,662.6**	**2,158,277.7**	**2,476,397.4**	**2,579,638.5**

[1] Includes savings, fixed, NIDs, repos and others deposits
[2] Includes statutory reserves of banking institutions
[3] Effective 2006, portions of `Other assets´ have been re-classified
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.2
Banking System[1]: Income and Expenditure

	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Interest income	40,755.3	43,659.6	52,134.5	59,789.9	63,146.9
Less: Interest expense	20,591.0	22,034.8	27,809.1	32,847.4	34,058.1
Net interest income	20,164.4	21,624.8	24,325.4	26,942.6	29,088.8
Add: Fee-based income	4,229.4	4,721.2	5,167.9	6,896.4	7,385.8
Less: Staff cost	5,662.1	6,280.0	7,509.5	8,557.4	9,342.5
Overheads	6,427.1	7,057.8	8,211.3	9,522.0	10,826.0
Gross operating profit	12,304.6	13,008.2	13,772.5	15,759.6	16,306.1
Less: Loan loss and other provisions	4,586.9	5,558.7	6,538.3	5,370.1	4,170.1
Gross operating profit after provision	7,717.7	7,449.6	7,234.2	10,389.4	12,136.0
Add: Other income	3,851.7	4,932.2	5,715.0	7,312.4	7,033.8
Pre-tax profit	**11,569.4**	**12,381.8**	**12,949.2**	**17,701.9**	**19,169.7**
Pre-tax profit / Average assets (%)	1.4	1.4	1.3	1.5	1.5
Pre-tax profit / Average shareholders' funds (%)	16.3	16.8	16.2	19.7	18.5
Pre-tax profit / Average employee (RM'000)	125.2	130.3	131.8	168.5	170.8
Cost incurred per ringgit of revenue earned (sen)	42.8	42.6	44.7	43.9	46.4
Cost incurred per ringgit of net interest income (sen)	60.0	61.7	64.6	67.1	69.3
Overheads to staff cost (%)	113.5	112.4	109.3	111.3	115.9
Staff cost per employee (RM'000)	60.3	65.3	74.8	78.0	81.3

[1] Includes Islamic banks
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.3
Commercial Banks[1]: Income and Expenditure

	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Interest income	39,093.6	41,960.9	50,396.0	56,890.9	60,568.2
Less: Interest expense	19,395.0	20,768.9	26,486.7	30,619.2	32,180.0
Net interest income	19,698.6	21,192.0	23,909.3	26,271.7	28,388.2
Add: Fee-based income	3,878.0	4,367.0	4,885.7	5,596.7	5,967.2
Less: Staff cost	5,364.6	5,932.4	7,088.5	7,753.0	8,515.3
Overheads	6,272.5	6,876.9	7,926.3	8,590.1	9,949.8
Gross operating profit	11,939.5	12,749.8	13,780.2	15,525.4	15,890.3
Less: Loan loss and other provisions	4,485.4	5,444.7	6,339.3	5,517.7	4,128.3
Gross operating profit after provision	7,454.1	7,305.0	7,440.9	10,007.7	11,762.0
Add: Other income	3,300.8	3,790.3	4,642.2	5,647.8	6,726.6
Pre-tax profit	**10,754.9**	**11,095.3**	**12,083.1**	**15,655.4**	**18,488.6**
Pre-tax profit / Average assets (%)	1.3	1.3	1.2	1.4	1.5
Pre-tax profit / Average shareholders' funds (%)	16.3	16.2	16.4	19.2	19.6
Pre-tax profit / Average employee (RM'000)	119.7	120.1	126.9	157.5	177.6
Cost incurred per ringgit of revenue earned (sen)	43.3	43.6	44.9	43.6	44.9
Cost incurred per ringgit of net interest income (sen)	59.1	60.4	62.8	62.2	65.0
Overheads to staff cost (%)	116.9	115.9	111.8	110.8	116.8
Staff cost per employee (RM'000)	58.8	63.5	73.2	76.1	80.1

[1] Includes finance companies and Islamic banks
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.4
Investment Banks: Income and Expenditure

	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Interest income	1,661.7	1,698.7	1,738.5	2,899.0	2,578.6
Less: Interest expense	1,196.0	1,265.9	1,322.4	2,228.2	1,878.0
Net interest income	465.8	432.8	416.0	670.9	700.6
Add: Fee-based income	351.4	354.2	282.2	1,299.7	1,418.5
Less: Staff cost	297.5	347.6	421.0	804.4	827.2
Overheads	154.6	180.9	285.0	932.0	876.1
Gross operating profit	365.1	258.5	-7.7	234.2	415.8
Less: Loan loss and other provisions	101.5	113.9	199.0	-147.5	41.8
Gross operating profit after provision	263.6	144.5	-206.7	381.8	373.9
Add: Other income	550.9	1,141.9	1,072.8	1,664.7	307.1
Pre-tax profit	**814.4**	**1,286.5**	**866.2**	**2,046.4**	**681.1**
Pre-tax profit / Average assets (%)	1.9	2.9	1.5	2.9	1.0
Pre-tax profit / Average shareholders' funds (%)	15.5	23.2	13.8	25.2	7.6
Pre-tax profit / Average employee (RM'000)	318.2	484.1	281.8	364.0	83.7
Cost incurred per ringgit of revenue earned (sen)	33.0	27.4	39.9	47.8	70.2
Cost incurred per ringgit of net interest income (sen)	97.1	122.1	169.7	258.8	243.1
Overheads to staff cost (%)	52.0	52.0	67.7	115.9	105.9
Staff cost per employee (RM'000)	110.6	132.4	119.5	104.2	96.6

p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.5
Islamic Banking System: Income and Expenditure

	For the calendar year				
	2004	2005[1]	2006[1]	2007	2008*p*
	RM million				
Income	4,124.3	4,183.1	5,271.2	7,688.8	9,126.2
Less: Expense	1,681.5	1,639.8	2,418.9	3,528.8	4,161.6
Net income	2,442.8	2,543.3	2,852.3	4,159.9	4,964.6
Add: Fee-based income	174.7	232.7	297.7	461.4	490.4
Less: Staff cost	265.2	282.7	346.8	800.0	886.2
Overheads	419.1	468.5	812.7	1,454.6	1,869.2
Gross operating profit	1,933.2	2,024.8	1,990.5	2,366.7	2,699.5
Less: Financing loss and other provisions	1,162.3	652.5	575.3	917.9	1,201.2
Gross operating profit after provisions	770.9	1,372.3	1,415.2	1,448.8	1,498.3
Add: Other income	134.8	170.3	197.2	445.3	312.0
Pre-tax profit	**905.7**	**1,542.6**	**1,612.4**	**1,894.1**	**1,810.4**
Pre-tax profit / Average assets (%)	1.0	1.9	1.6	1.3	1.0
Pre-tax profit / Average shareholders' funds (%)	16.8	24.0	18.7	15.6	12.4
Pre-tax profit / Average employee (RM'000)[2]	125.5	195.0	198.8	165.3	103.3
Cost incurred per ringgit of revenue earned (sen)	15.4	18.0	22.0	26.2	27.8
Cost incurred per ringgit of net income (sen)	28.0	29.5	40.7	54.2	55.5
Overheads to staff cost (%)	158.0	165.7	234.3	181.8	210.9
Staff cost per-employee (RM'000)[2]	32.6	32.9	45.5	108.2	108.8

[1] Excludes one Islamic bank that made exceptional loss
[2] Number of employees is estimated based on the percentage of institution's Islamic assets
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.6
Banking System: Key Data

	As at end				
	2004	2005	2006	2007	2008
Number of institutions	41	43	42	47	54
Commercial banks[1]	*29*	*27*	*22*	*22*	*22*
Investment banks	*10*	*10*	*10*	*14*	*15*
Islamic banks	*2*	*6*	*10*	*11*	*17*
Office network	2,429	2,244	2,139	2,245	2,271
Commercial banks[1]	*2,276*	*2,072*	*1,952*	*1,968*	*1,979*
Investment banks	*17*	*19*	*19*	*120*	*131*
Islamic banks[2]	*136*	*766*	*1,167*	*1,272*	*2,039*
Number of banks with Internet services	14	14	16	18	21
Number of employees	93,948	96,106	100,414	109,641	114,856
Commercial banks[1]	*87,222*	*89,047*	*91,741*	*96,146*	*99,593*
Investment banks	*2,690*	*2,625*	*3,522*	*7,721*	*8,561*
Islamic banks	*4,036*	*4,434*	*5,151*	*5,774*	*6,702*

[1] Includes finance companies
[2] Includes Islamic bank branches that are shared with conventional bank branches

Table A.7
Commercial Banks[1]: Commitments and Contingencies

	As at end				
	2004	2005	2006	2007	2008*p*
	RM million				
Assets sold with recourse and commitments with drawdown	24,728.9	21,693.4	21,052.0	19,574.6	12,744.2
Credit extension commitments	204,293.3	228,723.2	258,026.1	303,862.7	345,252.0
Direct credit substitutes	14,713.9	16,026.4	16,404.2	19,424.7	21,178.9
Foreign exchange related contracts	175,269.0	161,030.2	212,377.6	368,769.5	365,715.5
Interest rate related contracts	163,101.1	252,488.9	552,340.1	642,812.1	750,508.2
Trade-related contingencies	23,851.7	21,049.1	20,767.3	17,756.9	13,768.9
Transaction-related contingencies	21,685.4	23,529.3	26,245.3	29,031.1	34,025.0
Underwriting obligations	1,522.9	1,605.7	1,310.4	2,282.7	1,383.5
Others	14,636.8	19,211.5	34,360.7	44,026.3	53,138.4
Total	**643,803.0**	**745,357.7**	**1,142,883.7**	**1,447,540.5**	**1,597,714.6**

[1] Includes finance companies & Islamic banks
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.8
Investment Banks: Commitments and Contingencies

	As at end				
	2004	2005	2006	2007	2008*p*
	RM million				
Assets sold with recourse and commitments with drawdown	2,493.7	2,418.3	2,968.0	2,049.9	79.1
Credit extension commitments	2,387.6	2,847.3	1,681.3	4,140.4	2,335.2
Direct credit substitutes	1,126.2	1,312.4	855.5	1,165.9	729.4
Foreign exchange related contracts	2,877.6	4,976.9	5,669.7	2,812.3	461.9
Interest rate related contracts	169,189.1	112,409.4	38,010.1	44,180.0	13,994.8
Trade-related contingencies	0.0	0.0	0.0	1.1	0.0
Transaction-related contingencies	676.6	1,794.5	1,304.5	806.7	168.0
Underwriting obligations	1,029.6	2,106.5	4,599.8	3,486.7	2,551.8
Others	44.6	506.2	7,950.4	26,943.7	8,461.3
Total	**179,825.0**	**128,371.5**	**63,039.2**	**85,586.6**	**28,781.4**

p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.9
Life Insurance[1]: Income and Outgo

Item	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Income					
Premium income	15,152.1	16,020.6	17,148.0	18,922.5	18,771.7
Net investment income	3,175.9	3,661.2	3,994.7	4,568.3	4,906.6
Profit on sale of assets and miscellaneous income	2,058.2	1,257.1	2,624.6	4,949.7	3,100.6
Total	20,386.2	20,938.9	23,767.3	28,440.5	26,778.9
Outgo					
Net policy benefits	5,401.1	6,274.1	7,320.2	9,661.8	10,024.1
Agency remuneration	2,391.5	2,509.7	2,462.4	2,582.9	2,724.8
Management expenses[2]	1,017.4	1,073.4	1,252.1	1,387.6	1,563.6
Loss on disposal of assets and other outgo	584.4	1,159.1	1,064.3	984.6	4,925.4
Total	9,394.4	11,016.3	12,099.0	14,616.9	19,237.9
Excess of income over outgo	10,991.8	9,922.6	11,668.3	13,823.6	7,541.0

[1] Figures are based on combined business within and outside Malaysia
[2] Inclusive of net bad and doubtful debts
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.10
General Insurance[1]: Underwriting and Operating Results

Item	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Underwriting profit	474.8	998.1	490.3	16.0	81.5
Investment income	610.3	663.3	730.0	796.6	789.9
Capital gains	195.2	108.6	184.7	588.0	122.3
Other income	83.4	112.6	269.1	107.6	133.6
Capital losses	19.7	89.1	87.6	16.1	155.4
Other outgo	127.7	205.4	125.9	153.0	383.0
Operating profit	1,216.3	1,588.1	1,460.6	1,339.1	588.9

[1] Figures are based on combined business within and outside Malaysia
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.11
Family Takaful[1]: Income and Outgo

Item	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Income					
Net contributions	794.4	977.1	1,241.5	1,990.5	2,370.4
Net investment income	156.6	192.3	232.0	282.2	298.5
Profit on sale of assets and miscellaneous income	78.4	57.7	126.5	103.1	165.4
Total	1,029.4	1,227.0	1,600.0	2,375.8	2,834.3
Outgo					
Net certificate benefits	281.0	347.2	400.8	535.5	633.3
Net commissions	83.1	93.0	129.4	187.1	317.2
Management expenses[2]	95.0	46.3	97.5	161.3	141.6
Loss on disposal of assets and other outgo	95.3	60.3	100.7	50.3	202.3
Total	554.5	546.8	728.5	934.3	1,294.4
Excess of income over outgo	475.0	680.3	871.6	1,441.5	1,539.9

[1] Figures are based on combined business within and outside Malaysia; and actual expenses borne by family takaful funds
[2] Inclusive of net bad and doubtful debts
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.12
General Takaful[1]: Underwriting and Operating Results

Item	For the calendar year				
	2004	2005	2006	2007	2008*p*
	RM million				
Underwriting profit	113.0	169.7	44.1	-26.8	113.0
Investment income	14.8	19.6	32.3	44.6	50.6
Capital gains	2.1	3.2	3.8	10.3	13.5
Other income	3.0	5.8	19.2	10.8	36.8
Capital losses	1.2	4.5	9.5	0.7	15.1
Other outgo	16.2	13.9	9.9	13.7	27.3
Operating profit	115.6	180.0	80.0	24.5	171.6

[1] Figures are based on combined business within and outside Malaysia; and actual expenses borne by general takaful funds
p Preliminary
Note: Numbers may not necessarily add up due to rounding

Table A.13
Development Financial Institutions[1] : Sources and Uses of Funds

	As at end				
	2004	2005	2006	2007	2008
	RM million				
Sources:					
Shareholders' funds	10,543.8	12,744.0	15,091.1	17,767.8	23,392.4
Paid-up capital	*7,862.3*	*8,563.4*	*10,296.7*	*10,341.8*	*12,526.8*
Reserves	*2,051.3*	*2,221.5*	*3,006.0*	*3,390.7*	*4,413.3*
Retained earnings	*630.2*	*1,959.1*	*1,788.4*	*4,035.3*	*6,452.3*
Deposits accepted	49,878.0	54,084.7	60,402.0	67,067.9	79,542.8
Borrowings	18,730.9	20,672.5	23,239.1	24,771.4	21,500.0
Government	*13,050.1*	*13,386.2*	*14,823.7*	*17,188.6*	*13,598.5*
Multilateral/International agencies	*4,044.2*	*4,103.2*	*4,050.7*	*2,784.0*	*2,420.1*
Others	*1,636.6*	*3,183.1*	*4,364.7*	*4,798.8*	*5,481.4*
Others	12,297.2	12,366.7	14,829.9	19,163.3	20,015.1
Total	**91,449.9**	**99,867.9**	**113,562.1**	**128,770.4**	**144,450.3**
Uses:					
Deposits placed	18,908.0	13,964.4	18,831.3	20,519.5	20,070.2
Investments	25,557.0	28,034.6	28,819.7	32,762.5	36,635.3
of which:					
Government securities	*2,629.3*	*4,489.2*	*4,617.7*	*4,758.7*	*6,300.9*
Shares	*8,256.0*	*8,370.5*	*8,005.6*	*6,753.1*	*8,677.5*
Quoted	*6,369.1*	*7,030.1*	*7,561.4*	*6,434.7*	*8,392.6*
Unquoted	*1,886.9*	*1,340.4*	*444.2*	*318.4*	*284.9*
Loans and advances	37,747.1	47,495.9	55,527.8	65,279.2	75,255.4
Fixed assets	4,057.7	4,205.3	4,449.7	4,614.9	5,430.7
Others	5,180.1	6,167.7	5,933.6	5,594.3	7,058.7
Total	**91,449.9**	**99,867.9**	**113,562.1**	**128,770.4**	**144,450.3**
Contingencies					
Guarantee	3,949.0	4,341.0	5,365.7	4,660.7	4,200.7
Export credit insurance	308.6	380.5	348.8	659.4	784.2
Total	**4,257.6**	**4,721.5**	**5,714.5**	**5,320.1**	**4,984.9**

[1] Refers to Bank Pembangunan Malaysia Berhad, Bank Kerjasama Rakyat Malaysia Berhad, Bank Simpanan Nasional, Export-Import Bank of Malaysia Berhad, Bank Pertanian Malaysia Berhad (Agrobank), Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank), Malaysian Industrial Development Finance Berhad, Sabah Development Bank Berhad, Borneo Development Corporation (Sabah) Sendirian Berhad, Borneo Development Corporation (Sarawak) Sendirian Berhad, Credit Guarantee Corporation Malaysia Berhad, Sabah Credit Corporation and Lembaga Tabung Haji. Prior to 1 October 2005, data include Bank Industri & Teknologi Malaysia Berhad and Malaysia Export Credit Insurance Berhad and exclude SME Bank

Table A.14
Development Financial Institutions[1] under DFIA[2] : Sources and Uses of Funds

	As at end				
	2004	2005	2006	2007	2008
	RM million				
Sources:					
Shareholders' funds	6,178.1	8,398.1	10,484.2	11,498.3	17,091.2
Paid-up capital	*4,811.1*	*5,503.6*	*7,171.5*	*7,194.9*	*9,374.9*
Reserves	*1,339.4*	*1,479.9*	*2,207.7*	*2,533.7*	*3,556.3*
Retained earnings	*27.6*	*1,414.6*	*1,105.0*	*1,769.7*	*4,160.0*
Deposits accepted	37,278.5	40,225.5	45,098.7	50,450.3	59,210.4
Borrowings	14,586.9	16,437.2	18,729.1	19,877.1	15,913.1
Government	*10,438.2*	*12,201.1*	*13,758.7*	*15,917.4*	*12,162.1*
Multilateral/International agencies	*3,846.3*	*3,927.4*	*3,869.8*	*2,574.5*	*2,256.7*
Others	*302.4*	*308.7*	*1,100.6*	*1,385.2*	*1,494.3*
Others	9,730.3	9,550.1	11,343.1	15,269.5	15,689.7
Total	**67,773.8**	**74,610.9**	**85,655.1**	**97,095.2**	**107,904.4**
Uses:					
Deposits placed	12,949.5	8,204.7	12,713.4	11,171.7	11,673.7
Investments	15,868.1	18,634.9	17,500.6	20,873.3	19,590.6
of which:					
Government securities	*2,549.8*	*4,446.2*	*4,560.1*	*4,726.1*	*6,300.9*
Shares	*1,705.8*	*1,742.3*	*1,429.5*	*646.5*	*434.1*
Quoted	*1,616.7*	*1,625.7*	*1,325.5*	*571.4*	*391.0*
Unquoted	*89.1*	*116.6*	*104.1*	*75.1*	*43.1*
Loans and advances	33,472.5	43,374.9	50,961.4	60,473.0	70,132.6
Fixed assets	1,786.1	1,843.0	1,994.9	2,057.4	2,318.6
Others	3,697.6	2,553.4	2,484.8	2,519.8	4,188.9
Total	**67,773.8**	**74,610.9**	**85,655.1**	**97,095.2**	**107,904.4**
Contingencies					
Guarantee	533.3	613.5	524.7	561.5	367.4
Export credit insurance	308.6	380.5	348.8	659.4	784.2
Total	**841.9**	**994.0**	**873.5**	**1,220.9**	**1,151.6**

[1] Refers to Bank Pembangunan Malaysia Berhad, Bank Kerjasama Rakyat Malaysia Berhad, Bank Simpanan Nasional, Export-Import Bank of Malaysia Berhad, Bank Pertanian Malaysia Berhad (Agrobank) and Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank). Prior to 1 October 2005, data include Bank Industri & Teknologi Malaysia Berhad and Malaysia Export Credit Insurance Berhad and exclude SME Bank
[2] Development Financial Institutions Act 2002

Table A.15
Development Financial Institutions[1]: Direction of Lending

	As at end				
	2004	2005	2006	2007	2008
	RM million				
Agriculture, forestry and fishery	3,261.3	3,359.1	3,575.7	3,968.3	4,976.9
Mining and quarrying	66.8	56.6	41.6	20.3	120.2
Manufacturing	4,126.2	4,474.3	4,655.7	5,687.8	5,856.3
Electricity, gas and water supply	1,228.9	2,253.0	2,920.9	3,497.5	3,765.8
Import and export, wholesale and retail trade, restaurants and hotels	698.8	643.3	761.2	1,030.8	1,497.9
Broad property sector	10,084.7	11,789.4	15,192.4	16,382.3	16,900.8
Construction	*4,186.6*	*5,246.6*	*7,057.1*	*7,542.1*	*8,493.2*
Purchase of residential property	*4,078.1*	*5,475.5*	*6,868.0*	*7,396.7*	*7,020.9*
Purchase of non-residential property	*463.9*	*429.6*	*545.8*	*614.1*	*357.4*
Real estate	*1,356.1*	*637.7*	*721.5*	*829.4*	*1,029.3*
Transport, storage and communication	4,665.2	5,837.1	6,281.1	5,610.0	5,473.4
Maritime	474.4	681.5	799.0	1,834.5	1,916.7
Finance, insurance and business services	984.2	766.1	877.4	1,056.6	786.7
Consumption credit	9,896.5	14,074.3	17,435.8	23,159.8	31,356.6
of which:					
Purchase of motor vehicles	*1,104.8*	*1,508.2*	*2,168.8*	*2,376.4*	*2,549.0*
Credit card	*24.3*	*32.6*	*50.4*	*86.7*	*174.8*
Purchase of securities	103.4	214.1	189.9	66.0	218.9
Others	2,156.7	3,347.1	2,797.1	2,965.3	2,385.2
Total	**37,747.1**	**47,495.9**	**55,527.8**	**65,279.2**	**75,255.4**

[1] Refers to Bank Pembangunan Malaysia Berhad, Bank Kerjasama Rakyat Malaysia Berhad, Bank Simpanan Nasional, Export-Import Bank of Malaysia Berhad, Bank Pertanian Malaysia Berhad (Agrobank), Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank), Malaysian Industrial Development Finance Berhad, Sabah Development Bank Berhad, Borneo Development Corporation (Sabah) Sendirian Berhad, Borneo Development Corporation (Sarawak) Sendirian Berhad, Credit Guarantee Corporation Malaysia Berhad, Sabah Credit Corporation and Lembaga Tabung Haji. Prior to 1 October 2005, data include Bank Industri & Teknologi Malaysia Berhad and exclude SME Bank

Table A.16
Development Financial Institutions[1] under DFIA[2]: Direction of Lending

	As at end				
	2004	2005	2006	2007	2008
	RM million				
Agriculture, forestry and fishery	3,148.3	3,239.5	3,513.7	3,864.8	4,862.9
Mining and quarrying	49.1	35.5	19.9	14.2	116.5
Manufacturing	2,872.2	3,254.5	3,422.1	4,475.3	4,650.8
Electricity, gas and water supply	1,228.9	2,251.6	2,919.7	3,496.5	3,764.9
Import and export, wholesale and retail trade, restaurants and hotels	260.7	356.8	502.2	779.8	1,280.9
Broad property sector	8,933.1	10,580.9	13,709.2	14,794.9	15,217.8
Construction	*3,973.7*	*4,908.8*	*6,566.4*	*7,030.1*	*7,989.6*
Purchase of residential property	*3,797.0*	*5,195.4*	*6,582.3*	*7,119.8*	*6,747.8*
Purchase of non-residential property	*461.2*	*429.1*	*480.8*	*561.4*	*237.4*
Real estate	*701.2*	*47.6*	*79.7*	*83.6*	*243.0*
Transport, storage and communication	4,615.0	5,778.3	6,200.0	5,534.6	5,408.7
Maritime	474.4	681.5	799.0	1,834.5	1,916.7
Finance, insurance and business services	827.4	657.0	763.1	939.7	751.9
Consumption credit	9,571.1	13,679.5	16,926.8	22,433.5	30,417.6
of which:					
Purchase of motor vehicles	*1,104.8*	*1,508.2*	*2,095.4*	*2,315.6*	*2,512.8*
Credit card	*24.3*	*32.6*	*50.4*	*86.7*	*174.8*
Purchase of securities	103.4	88.2	64.9	66.0	218.9
Others	1,388.9	2,771.6	2,120.8	2,239.2	1,525.0
Total	**33,472.5**	**43,374.9**	**50,961.4**	**60,473.0**	**70,132.6**

[1] Refers to Bank Pembangunan Malaysia Berhad, Bank Kerjasama Rakyat Malaysia Berhad, Bank Simpanan Nasional, Export-Import Bank of Malaysia Berhad, Bank Pertanian Malaysia Berhad (Agrobank) and Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank). Prior to 1 October 2005, data include Bank Industri & Teknologi Malaysia Berhad and exclude SME Bank

[2] Development Financial Institutions Act 2002

Table A.17
Development Financial Institutions[1] under DFIA[2]: Non-performing Loans and Loan Loss Provisions

	As at end	
	2007	2008
	RM million	
General provisions	1,327.0	1,412.3
Interest-in-suspense	957.6	673.5
Specific provisions	2,506.0	2,462.1
Non-performing loans	5,140.4	4,561.2
	(%)	
Gross NPL ratio	8.8	6.7
Net NPL ratio	3.0	2.2
Total provisions/NPL	93.2	99.7

[1] Refers to Bank Pembangunan Malaysia Berhad, Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank), Bank Kerjasama Rakyat Malaysia Berhad, Bank Simpanan Nasional, Export-Import Bank of Malaysia Berhad and Bank Pertanian Malaysia Berhad (Agrobank)
[2] Development Financial Institutions Act 2002

Table A.18
Bank Pembangunan Malaysia Berhad

Year of establishment	1973
Objectives	To provide medium and long-term financing for infrastructure projects, maritime, capital intensive and high technology industries in manufacturing sector and other selected sectors in line with the national development policy.

Sector	Loans Outstanding		Loans Approved		Loans Disbursed	
	As at end		During the Year		During the Year	
	2007	2008	2007	2008	2007	2008
	RM million					
Infrastructure	15,403.3	14,798.0	2,526.3	2,007.9	2,540.2	1,188.3
Government programmes	*12,880.1*	*11,909.1*	*1,355.7*	*1,992.5*	*1,660.6*	*653.7*
Private programmes	*2,523.2*	*2,888.9*	*1,170.6*	*15.4*	*879.6*	*534.6*
Maritime	1,834.5	1,916.7	526.0	490.1	1,358.7	476.3
Shipping industry	*776.4*	*1,011.8*	*503.8*	*430.1*	*480.0*	*369.0*
Shipyard industry	*868.9*	*756.1*	*22.2*	*60.0*	*826.1*	*107.3*
Marine-related services	*189.2*	*148.8*	*0.0*	*0.0*	*52.6*	*0.0*
Manufacturing: High technology	942.4	995.4	1,233.6	82.0	391.7	321.5
Others	29.6	19.5	3.1	1.4	6.3	1.9
Total	**18,209.8**	**17,729.6**	**4,289.0**	**2,581.4**	**4,296.9**	**1,988.0**

Source: Bank Pembangunan Malaysia Berhad

Table A.19
Bank Perusahaan Kecil & Sederhana Malaysia Berhad (SME Bank)

Year of establishment	October 2005					
Objectives	To provide financing and advisory services to SMEs involved in manufacturing, services and construction sectors, particularly Bumiputera entrepreneurs.					
Sector	Loans Outstanding		Loans Approved		Loans Disbursed	
	As at end		During the year		During the year	
	2007	2008	2007	2008	2007	2008
	RM million					
SMEs	2,204.7	2,837.6	3,057.1	2,200.9	1,739.3	1,881.7
Micro	*255.6*	*279.9*	*232.2*	*220.0*	*204.1*	*174.1*
Small	*1,115.3*	*1,218.5*	*801.2*	*549.5*	*752.1*	*667.9*
Medium	*833.8*	*1,339.2*	*2,023.7*	*1,431.5*	*783.1*	*1,039.7*
Others	439.3	427.1	0.0	0.0	121.9	102.7
Total	**2,644.0**	**3,264.7**	**3,057.1**	**2,200.9**	**1,861.2**	**1,984.4**

Source: Bank Perusahaan Kecil & Sederhana Malaysia Berhad

Table A.20
Export-Import Bank of Malaysia Berhad

Year of establishment	1995
Objectives	To provide credit facilities to finance and support the exports and imports of goods, services and overseas project financing with concentration to the non-traditional markets, as well as to provide export credit insurance services, export financing insurance, overseas investment insurance and guarantee facilities, as well as other services which are normally offered by the export-import financial institutions and credit insurance financial institutions.

Loans Facility	**Loans Outstanding (RM million)**		**Loans Approved (RM million)**		**Loans Disbursed (RM million)**	
	As at end-2007	As at end-2008	2007	2008	2007	2008
Buyer credit facility	639.6	797.4	169.0	140.0	521.7	328.3
Overseas investment credit facility	808.8	708.1	429.1	0.0	347.6	371.1
Malaysian Kitchen facility	0.0	4.5	0.0	3.9	0.0	3.8
Supplier credit facility	290.3	429.2	850.1	250.7	723.9	998.2
Export credit refinancing	1,955.0	1,860.9	8,428.9	9,514.8	8,428.9	9,514.8
Total	**3,693.7**	**3,800.1**	**9,877.1**	**9,909.4**	**10,022.1**	**11,216.2**

Guarantee and Insurance Policy	**Contingent Liabilities (RM million)**		**Business Coverage (RM million)**	
	As at end-2007	As at end-2008	2007	2008
Short-term Policies				
Comprehensive policies	*573.0*	*616.0*	*2,518.0*	*2,553.0*
Bank letter of credit policy	*33.9*	*63.0*	*116.7*	*66.8*
Specific policies	*0.9*	*0.0*	*1.0*	*0.0*
Others	*33.1*	*59.0*	*57.2*	*19.4*
Sub-total	640.9	738.0	2,692.9	2,639.2
Medium and Long-term Policies				
Specific policies	*80.0*	*45.0*	*84.0*	*47.6*
Buyer credit guarantee	*270.0*	*159.0*	*225.0*	*165.8*
Bond indemnity support	*64.0*	*63.0*	*71.0*	*70.4*
Overseas investment insurance	*3.1*	*64.0*	*3.5*	*83.2*
Others	*162.9*	*83.0*	*0.0*	*0.0*
Sub-total	580.0	414.0	383.5	367.0
Total	**1,220.9**	**1,152.0**	**3,076.4**	**3,006.2**

Source: Export-Import Bank of Malaysia Berhad

Table A.21
Bank Kerjasama Rakyat Malaysia Berhad

Year of establishment	1954					
Objectives	Mobilises savings and provides financing services to its members as well as non-members.					
Deposits Accepted	Deposits Accepted (RM million)					
	As at end-2007			As at end-2008		
	Members	Non-members	Total	Members	Non-members	Total
	937.9	26,320.5	27,258.4	11,872.8	20,773.6	32,646.4
Direction of Financing	Financing Outstanding (RM million)					
	As at end-2007			As at end-2008		
Sector	Members	Non-members	Total	Members	Non-members	Total
Agriculture	17.8	82.8	100.6	15.5	156.6	172.1
Purchase of residential property	2,826.3	1,178.9	4,005.2	2,748.0	1,113.8	3,861.8
Purchase of non-residential property	113.5	157.1	270.6	107.6	58.0	165.6
General commerce	0.6	63.4	64.0	65.7	133.8	199.5
Purchase of securities	77.9	92.8	170.7	114.9	98.5	213.4
Consumption credit	12,380.1	6,605.5	18,985.6	8,717.4	16,489.5	25,206.9
of which:						
Purchase of motor vehicles	*601.0*	*1,464.5*	*2,065.5*	*572.3*	*1,685.9*	*2,258.2*
Manufacturing	0.1	167.2	167.3	0.1	465.2	465.3
Others	129.1	839.7	968.8	103.6	1,737.8	1,841.4
Total	**15,545.4**	**9,187.4**	**24,732.8**	**11,872.8**	**20,253.2**	**32,126.0**

Source: Bank Kerjasama Rakyat Malaysia Berhad

Table A.22
Bank Simpanan Nasional

Year of establishment	1974	
Objectives	To focus on retail banking and personal finance especially for small savers.	
Deposits Facility	RM million	
	As at end-2007	As at end-2008
Fixed deposits	3,780.8	4,703.4
GIRO deposits	4,745.1	4,992.2
Islamic deposits	3,706.1	4,612.8
Premium savings certificates	899.9	987.5
Others	293.1	122.1
Total	**13,425.0**	**15,418.0**
Investments	RM million	
	As at end-2007	As at end-2008
Quoted shares	214.4	161.3
Government securities	4,668.2	5,681.4
of which:		
Malaysian Government Securities	*3,347.5*	*3,301.1*
Private debt securities	595.9	864.9
Subsidiary companies	467.8	34.5
Associate companies	231.8	231.8
Others	1,156.8	390.7
Total	**7,334.9**	**7,364.6**
Direction of Lending	RM million	
	As at end-2007	As at end-2008
Purchase of securities	6.9	5.5
Purchase of residential property	2,645.1	2,886.0
Purchase of non-residential property	66.5	71.7
Consumption credit	4,264.1	5,210.7
Others	420.7	400.3
Total	**7,403.3**	**8,574.2**

Source: Bank Simpanan Nasional

Table A.23
Bank Pertanian Malaysia Berhad (Agrobank)

Year of establishment	1969					
Objectives	To promote sound agricultural development in the country, through the provision of loans and advances. The main function of the bank is to co-ordinate and supervise the granting of credit facilities for agricultural purposes and mobilse savings, particularly from the agriculture sector and community.					
Agriculture, Forestry & Fishery	Loans Outstanding (RM million)		Loans Approved (RM million)		Loans Disbursed (RM million)	
	As at end		During the year		During the year	
	2007	2008	2007	2008	2007	2008
Sub-sector						
Oil palm	*851.2*	*953.7*	*465.3*	*460.2*	*198.4*	*304.0*
Food crops	*423.3*	*417.8*	*193.6*	*171.1*	*151.5*	*193.5*
Livestock	*477.2*	*576.7*	*263.8*	*310.9*	*137.1*	*300.2*
Fishery	*367.0*	*320.6*	*135.9*	*240.7*	*110.2*	*138.5*
Forestry	*42.4*	*120.3*	*41.5*	*49.2*	*2.1*	*92.8*
Tobacco	*19.8*	*1.1*	*0.6*	*0.5*	*4.8*	*4.2*
Rubber	*56.0*	*62.6*	*34.3*	*27.9*	*20.6*	*27.8*
Others	*1,568.6*	*2,185.2*	*601.0*	*1,904.7*	*618.1*	*2,036.4*
Total	**3,805.5**	**4,638.0**	**1,736.0**	**3,165.2**	**1,242.8**	**3,097.4**

Source: Bank Pertanian Malaysia Berhad

Table A.24
Development Financial Institutions: Selected Data

	As at end					
	2007			2008		
DFIs under DFIA[1]:	Branch	ATM	Staff	Branch	ATM	Staff
Bank Pembangunan Malaysia Berhad	-	-	499	-	-	381
Bank Kerjasama Rakyat Malaysia Berhad	112	165	3,239	117	234	3,618
Bank Simpanan Nasional	375	626	4,865	374	667	5,278
Export-Import Bank of Malaysia Berhad	-	-	205	-	-	213
Bank Pertanian Malaysia Berhad	172	148	2,683	172	164	2,916
Bank Perusahaan Kecil & Sederhana Malaysia Berhad	18	-	908	19	-	984
Sub-total	677	939	12,399	682	1,065	13,390
Other DFIs:						
Malaysian Industrial Development Finance Berhad	9	-	425	6	-	365
Sabah Development Bank Berhad	-	-	83	-	-	88
Borneo Development Corporation (Sabah) Sendirian Berhad	-	-	13	-	-	13
Borneo Development Corporation (Sarawak) Sendirian Berhad	-	-	35	-	-	31
Credit Guarantee Corporation Malaysia Berhad	16	-	415	16	-	465
Sabah Credit Corporation	10	-	201	10	-	200
Lembaga Tabung Haji	123	-	1,936	123	-	1,963
Sub-total	158	-	3,108	155	-	3,125
Total	**835**	**939**	**15,507**	**837**	**1,065**	**16,515**

[1] Development Financial Institutions Act 2002

Table A.25
Household Sector: Selected Indicators

	2004	2005	2006	2007	2008
	RM million				
Household debt[1]	316,158	361,029	393,758	426,800	467,043
Household financial assets[2]	790,453	856,849	977,617	1,158,805	1,111,172
	%				
Household debt to GDP ratio	66.7	69.1	68.6	66.5	63.1
Household financial assets to household debt ratio	250.0	237.3	248.3	271.5	237.9
Household banking system NPL ratio	8.5	8.1	7.1	5.4	4.2

[1] Comprises household loans outstanding in banking system, Bank Simpanan Nasional, Bank Kerjasama Rakyat Malaysia Berhad, insurance companies and Treasury Housing Loans Division
[2] Comprises household deposits held in banking system, Bank Simpanan Nasional, Bank Kerjasama Rakyat Malaysia Berhad, total assets of life insurance funds, household direct holdings of equity, Employees Provident Fund contributions and net asset value of unit trust funds

Source: Treasury Housing Loans Division, Securities Commission Malaysia, Employees Provident Fund and internal estimates

Table A.26
Basic Payments Indicator

	2004	2005	2006	2007	2008
Population (million)	25.9	26.4	26.9	27.5	28.0
GDP (RM million)	474,048	522,445	573,736	641,864	740,721
Cash in circulation (CIC) (RM million)	28,616.9	30,177.6	33,519.4	36,247.1	40,434.7
Volume of transactions (unit)					
Per capita:					
Cheque	7.7	7.6	7.5	7.7	7.4
E-payments:	18.1	22.3	29.0	33.9	37.6
Credit card	6.4	7.0	7.8	8.7	9.3
Charge card	0.3	0.2	0.2	0.2	0.2
Debit card	0.1	0.1	0.2	0.3	0.4
E-money	10.8	13.9	19.2	22.3	24.4
Interbank GIRO	0.1	0.4	0.7	1.0	1.3
Financial Process Exchange (FPX)	…	…	…	…	…
ATM[1]	…	0.1	0.1	0.1	0.2
Internet banking[2]	0.4	0.6	0.8	1.2	1.7
Mobile banking[2]	n.a.	…	…	0.1	0.1
RENTAS - Third party transactions[3]	n.a.	n.a.	…	0.1	0.1
Value of transactions (RM)					
Per capita:					
CIC	1,106.6	1,144.0	1,245.6	1,320.5	1,443.1
Cheque	52,841.7	51,467.1	53,584.9	62,443.1	62,868.3
E-payments:	2,549.5	3,484.3	21,892.6	219,775.9	280,870.3
Credit card	1,348.6	1,550.3	1,767.2	2,047.3	2,329.3
Charge card	81.4	82.0	86.9	88.1	109.2
Debit card	6.4	9.9	24.1	41.1	69.9
E-money	28.4	37.3	47.4	59.7	73.5
Interbank GIRO	544.5	997.3	1,700.2	2,439.2	3,198.4
FPX	0.1	0.5	0.9	16.6	35.9
ATM[1]	6.2	145.1	79.8	166.0	68.5
Internet banking[2]	533.9	661.6	930.9	1,586.3	1,613.9
Mobile banking[2]	n.a.	0.2	0.4	0.8	2.5
RENTAS - Third party transactions[3]	n.a.	n.a.	17,254.8	213,330.8	273,369.4
Percentage of GDP (%):					
CIC	6.0	5.8	5.8	5.6	5.5
Cheque	288.3	259.9	251.3	267.0	237.8
E-payments:	13.9	17.6	102.7	939.9	1,062.5
Credit card	7.4	7.8	8.3	8.8	8.8
Charge card	0.4	0.4	0.4	0.4	0.4
Debit card	…	…	0.1	0.2	0.3
E-money	0.2	0.2	0.2	0.3	0.3
Interbank GIRO	3.0	5.0	8.0	10.4	12.1
FPX	…	…	…	0.1	0.1
ATM[1]	…	0.7	0.4	0.7	0.3
Internet banking[2]	2.9	3.3	4.4	6.8	6.1
Mobile banking[2]	n.a.	…	…	…	…
RENTAS - Third party transactions[3] (times)	n.a.	n.a.	0.8	9.1	10.3

[1] Comprise bill payments, payments for electronic share application, interbank funds transfer, reloading of MEPS Cash, Touch 'n Go and mobile prepaid value
[2] Exclude non-financial transactions, credit card and IBG transactions performed online
[3] Data available from November 2006. RENTAS third party transactions include Government, custom duty and third party payments. Third party payment refers to Interbank Funds Transfer System (IFTS) transaction with a minimum amount of RM10,000, where the beneficiary or ordering party is a non-RENTAS member
n.a. Not available
… Negligible
Note: Numbers may not necessarily add up due to rounding

Table A.27
Usage of Various Cashless Payments: Volume and Value of Transactions

Volume of Transactions	2004	2005	2006	2007	2008
	million				
Payment instruments:					
Cheque	200.2	199.9	201.2	211.7	207.3
Credit card	164.5	184.6	208.8	237.6	261.4
Charge card	6.8	6.3	6.0	5.6	5.6
Debit card	1.6	2.1	4.2	9.1	10.7
E-money	279.4	365.6	517.0	613.1	684.9
Payment channels:					
Internet banking[1]	90.5	123.4	184.1	290.6	402.6
Mobile banking	n.a.	0.4	0.9	1.4	1.6
Mobile payment	-	-	0.3	3.0	9.0
ATM[2]	0.3	3.6	1.8	3.7	4.6
Payment systems:					
RENTAS - Third party transaction[3]	n.a.	n.a.	0.2	1.6	1.9
Interbank GIRO	3.7	10.4	18.7	26.6	36.2
FPX	…	…	…	0.1	0.3
Value of Transactions	RM billion				
Payment instruments:					
Cheque	1,366.5	1,357.7	1,442.0	1,714.1	1,761.6
Credit card	34.9	40.9	47.6	56.2	65.3
Charge card	2.1	2.2	2.3	2.4	3.1
Debit card	0.2	0.3	0.6	1.1	2.0
E-money	0.7	1.0	1.3	1.6	2.1
Payment channels:					
Internet banking[1]	14.3	259.1	334.8	417.8	624.4
Mobile banking	n.a.	…	…	…	0.1
Mobile payment	-	-	…	…	0.1
ATM[2]	0.2	3.8	2.1	4.6	1.9
Payment systems:					
RENTAS - Third party transaction[3]	n.a.	n.a.	464.3	5,855.9	7,659.8
Interbank GIRO	14.1	26.3	45.8	67.0	89.6
FPX	…	…	…	0.5	1.0

[1] Include transactions by corporate subscribers from 2005
[2] Comprise bill payments, payments for electronic share application, interbank funds transfer, reloading of MEPS Cash, Touch 'n Go and mobile prepaid value
[3] Data available from November 2006. RENTAS third party transactions include Government, custom duty and third party payments. Third party payment refers to IFTS transaction with a minimum amount of RM10,000, where the beneficiary or ordering party is a non-RENTAS member
n.a. Not available
… Negligible

Table A.28
Payment and Securities Transfer Instructions Handled by RENTAS: Volume and Value of Transactions

Volume of Transactions	2004	2005	2006	2007	2008
	'000				
Total volume of transactions	1,920.9	2,039.4	2,226.2	2,659.7	2,984.9
IFTS	1,797.0	1,881.3	2,065.8	2,548.4	2,890.9
Money market operations	101.3	93.1	103.2	108.3	111.5
Foreign exchange settlement	15.7	20.2	32.9	47.7	68.0
Third party transactions	n.a.	n.a.	168.7	1,567.0	1,905.1
Custom duty payment	*91.0*	*82.8*	*62.4*	*68.2*	*75.8*
Government payment[1]	*n.a.*	*n.a.*	*0.2*	*36.8*	*84.2*
Third party payment[1]	*n.a.*	*n.a.*	*106.2*	*1,462.0*	*1,745.1*
Others	1,589.0	1,685.2	1,761.0	825.5	806.3
SSTS[2]	123.9	158.0	160.4	111.3	94.0
Value of Transactions	RM billion				
Total value of transactions	17,872.7	19,314.6	24,974.6	29,880.6	38,744.2
IFTS	16,545.5	17,606.2	22,804.6	27,909.7	37,256.3
Money market operations	6,912.8	7,354.4	10,576.4	12,261.8	17,627.0
Foreign exchange settlement	920.2	1,262.4	1,531.4	2,179.0	3,310.8
Third party transactions	n.a.	n.a.	464.3	5,855.9	7,659.8
Custom duty payment	*2.2*	*2.6*	*2.3*	*2.6*	*3.1*
Government payment[1]	*n.a.*	*n.a.*	*3.5*	*39.9*	*88.3*
Third party payment[1]	*n.a.*	*n.a.*	*458.6*	*5,813.4*	*7,568.3*
Others	8,710.3	8,986.8	10,232.5	7,613.0	8,658.7
SSTS[2]	1,327.1	1,708.5	2,169.9	1,970.9	1,487.8

[1] Data available from November 2006. Third party payment refers to IFTS transaction with a minimum amount of RM10,000, where the beneficiary or ordering party is a non-RENTAS member
[2] Scripless Securities Transfer System, for Malaysian Government Securities, Treasury bills, and scripless public debt securities
n.a. Not available
Note: Numbers may not necessarily add up due to rounding

Table A.29
Number of Electronic Fund Transfer at Point-of-Sale (EFTPOS) Terminals

Terminals	2004	2005	2006	2007	2008
	Unit				
International brand payment cards[1]	n.a.	83,100	93,368	119,490	144,897
ATM card	n.a.	20,052	21,592	34,754	67,581
E-money	16,642	18,198	28,115	28,771	29,236

[1] MasterCard, Visa, American Express and Diners Club
n.a. Not available

Table A.30
Number of Cards and Users of Payment Instruments and Channels

	2004	2005	2006	2007	2008
	'000				
Number of cards/accounts:					
Credit card	6,583.0	7,815.5	8,833.0	9,899.3	10,812.4
Charge card	286.3	244.5	272.1	245.6	285.6
Debit card	10,237.2	15,676.7	18,861.4	21,887.3	24,436.6
Of which:					
ATM card	*7,335.1*	*12,067.9*	*14,582.2*	*17,351.8*	*19,479.6*
E-money	34,174.1	44,034.8	46,874.7	53,150.4	61,534.1
Number of subscribers:					
Internet banking	2,037.7	2,584.0	3,208.3	4,598.7	6,191.4
Mobile banking	25.7	127.6	246.7	345.7	529.6
Mobile payment	n.a.	n.a.	137.1	227.6	355.2

n.a. Not available

Table A.31
Total Outward and Inward Remittances

	2004	2005	2006	2007	2008
	RM million				
Total outward[1]	5,634.3	6,140.0	7,082.7	7,978.4	8,612.2
Remitted via:					
Banks	5,444.8	5,740.4	6,370.3	7,113.3	6,600.8
Non-banks	189.5	399.6	712.4	865.1	2,011.4
Total inward[2]	3,063.4	4,314.5	5,165.1	5,773.6	4,975.6
Remitted via:					
Banks	3,061.1	4,302.5	5,148.2	5,721.1	4,892.3
Non-banks	2.3	12.1	16.9	52.5	83.3

[1] Refer to total funds remitted from Malaysia to other countries
[2] Refer to total funds remitted from other countries to Malaysia

Table A.32
Number of Participants and Instrument Issuers

	2004	2005	2006	2007	2008
	unit				
RENTAS	52	55	53	54	60
Banks	*48*	*50*	*48*	*51*	*58*
Non-banks	*4*	*5*	*5*	*3*	*2*
SPICK/e-SPICK					
Banks	*n.a.*	*34*	*35*	*36*	*43*
Credit card	18	19	18	18	24
Banks	*17*	*17*	*16*	*16*	*21*
Non-banks	*1*	*2*	*2*	*2*	*3*
Debit card	14	14	15	14	20
International debit card	*5*	*5*	*7*	*6*	*15*
ATM card	*10*	*10*	*10*	*10*	*11*
Charge card	7	7	8	8	8
Banks	*3*	*3*	*5*	*5*	*5*
Non-banks	*4*	*4*	*3*	*3*	*3*
E-money[1]	5	8	13	15	19
Banks	-	*1*	*2*	*4*	*4*
Non-banks	*5*	*7*	*11*	*11*	*15*
Internet banking					
Banks	*15*	*15*	*17*	*19*	*22*
Mobile banking					
Banks	*4*	*5*	*6*	*7*	*10*
FPX					
Banks	*4*	*5*	*11*	*11*	*11*
Interbank GIRO					
Banks	*13*	*16*	*16*	*19*	*21*
Remittances	34	37	36	46	67
Banks	*32*	*34*	*33*	*34*	*40*
Non-banks	*2*	*3*	*3*	*12*	*27*

[1] Include international brand prepaid card
n.a. Not available