BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Preface

The Financial Stability and Payment Systems Report 2017 outlines Bank Negara Malaysia's assessment of risks and challenges faced by the Malaysian financial system and the capacity of the system to sustain its financial intermediation role in the economy. It also reports the developmental initiatives pursued by the Bank to reinforce the roles of the financial services sector in supporting and contributing to economic growth and the economic transformation process, as well as the regulatory and supervisory measures undertaken by the Bank to ensure continued safety and soundness of financial institutions and promote overall financial and payment systems stability.

This publication is intended to promote greater understanding on issues and developments affecting financial stability, including policy directions of the Bank.

The Financial Stability and Payment Systems Report is available in PDF format at www.bnm.gov.my

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Governor's Statement

Financial stability is a key precondition for sustainable economic development. This is more so for Malaysia, a highly open economy, where volatile financial markets and capital flows can cause major disruptions to trade and investment activities. And yet, the preservation of domestic financial stability is more challenging given the high degree of interconnectedness of domestic financial markets with the international financial system. External developments – geopolitical events, policy uncertainties in major economies and volatile commodity prices – will continue to have a significant impact on our financial system. The Bank, thus, remains vigilant of global developments and steadfast in ensuring that the domestic financial system is resilient to shifts in global market conditions.

In 2017, domestic financial stability was preserved in an environment of low financial market volatility and stronger performance of the domestic economy. Financial markets remained orderly, and financial market stress indicators trended lower. The series of measures introduced by the Financial Markets Committee are yielding results as seen in a more balanced demand and supply of ringgit, improved liquidity and contained speculative activities in the foreign exchange market. The efforts to deepen and strengthen the resilience of the domestic financial market will continue.

The financial sector remains robust with sound financial institutions that have strong buffers to weather potential shocks under extreme stress scenarios. Critically, this will continue to support financial intermediation activities. Great strides have been made in tackling concerns on household indebtedness. Household debt is now growing at its slowest pace since 2010 and overall household finances have continued to improve. However, there remain pockets of vulnerabilities that call for continued vigilance and the prudent management of risks by financial institutions. The Bank's surveillance and supervisory priorities will continue to focus on key risk hotspots, including the imbalances in the property market. New forward-looking assessment tools are also being developed to further strengthen the Bank's surveillance capabilities.

As the financial system grows in sophistication alongside rapid advancements in technology, the regulatory framework must remain progressive and relevant, guided by an appropriate balance between stability and progress. Given the state of constant change in the operating landscape, the Bank has established a five-year review regime to ensure that our policies remain relevant, appropriately tailored and proportionate in relation to financial stability and inclusion objectives. Regulatory priorities will focus not only in dealing with the risks and challenges of today, but also in ensuring that the financial sector is well-prepared for the future.

The Bank will continue to promote a market-based system to drive efficiency, innovation and competition in the financial sector. Through the Regulatory Sandbox, the Bank is facilitating new ways of delivering financial products and services to the market while the liberalisation of motor and fire insurance/takaful entered a new phase in 2017. The introduction of Value-based Intermediation in Islamic banking is a key industry-driven initiative to raise the impact of Islamic finance on the economy and society. In the payments system, the entry and offering of new payment solutions presents consumers and merchants with greater choice. This is further supported by ensuring interoperability between the different systems, thus promoting competition in the retail payment market and accelerating Malaysia's progress towards becoming a cashless society.

The emergence of digital currencies and cyber threats requires increased scrutiny as part of broader efforts to protect the integrity of the financial system. The Bank is working to shed more light on the informal sector to better protect consumers and expose criminal activities. The rise of illegal schemes, fraud and consumer misinformation are clear examples of risks confronting financial consumers. While the Bank, together with other agencies, is intensifying enforcement actions to address this problem, ultimately, it is critical to equip and empower the public with the knowledge and means to make sound financial decisions. During the year, eCCRIS was launched to provide Malaysians with secure access to their personal credit information at their fingertips.

The Bank places great importance on creating a more financially literate population with the capability and confidence to make sound financial decisions. This is an important condition to achieve a resilient and inclusive financial system and economy, particularly with the rise of increasingly innovative and sophisticated financial products. The series of Karnival Kewangan, organised jointly by the Bank and the financial industry, has reached out to thousands of Malaysians from all walks of life. These outreach and financial literacy initiatives will be further intensified under the planned implementation of a National Strategy for Financial Literacy formulated by the Financial Education Network. The National Strategy for Financial Literacy will provide a comprehensive and coordinated approach to elevate the financial literacy of Malaysians, involving key collaborators from the industry, regulatory authorities and government agencies.

The financial sector plays a critical role in supporting the country's transformation into a high value-added economy. More can be done to increase the contribution and quality of financial sector growth. Financial inclusion needs to go beyond access and include innovative solutions for meeting the financing needs of SMEs and new areas of growth. Increasingly, the financial sector is also expected to be more forthcoming in offering solutions to pressing issues facing the public. Housing affordability is such a case where greater innovation in financing products can be leveraged to help more eligible house buyers. Technology also offers enormous potential in this respect, particularly to improve the delivery and reach of financial products and address information asymmetries. Recognising the challenges of the lower income households, Perlindungan Tenang was launched to provide access to basic and affordable insurance and takaful protection for the eight million working-age Malaysians who are currently uninsured. Development financial institutions (DFIs) are also being revitalised to be in a better position to carry out their developmental mandates more effectively, including through the introduction of a new regulatory and supervisory framework that recognises the unique roles of DFIs.

The financial sector is at an exciting phase of its development. Greater adoption of cutting-edge technology, competition from non-traditional players and regulatory reforms will recast the workforce of the industry. New roles will be created and new skills required. The industry must therefore prepare the workforce for these changes, including retraining and upskilling employees, and assisting those who will be displaced. Ultimately, the financial sector must continue to create and provide high quality, highly productive and high paying jobs.

The bedrock to a sustainable financial sector is the quality and integrity of people in the industry. We are now approaching the 10th anniversary of the Global Financial Crisis, a sober reminder of the destructive effect of broken trust. As finance is built on trust, the Bank will continue its relentless pursuit of high standards of integrity and professionalism at all levels in the industry. In 2017, the focus on elevating the professional standing and capability of bank employees was strengthened through specialised certifications and professional accreditation. More remains to be done. The mandatory screening of new hires, which will be effective later in 2018, is aimed at ensuring that individuals joining financial institutions, particularly at senior positions, embody high standards of ethical and professional conduct. In addition, through the Responsibility Mapping initiative, the Bank will accord greater accountability to senior roles in financial institutions. Further, beginning this year, enforcement actions taken by the Bank for non-compliances by financial institutions will be publicly disclosed.

New ways will continue to be adopted to make more information on financial stability issues accessible to the public. This aims to better inform the public and encourage a greater appreciation of financial stability issues and policies taken to address them. The Housing Watch website, publication of research on property imbalances, data on changes in the financial sector workforce and regular releases of motor insurance premium developments highlight efforts on this front. In addition, recognising that the fluidity and dynamism of economic and financial conditions entails more timely updates, the Bank will, starting this year, publish Financial Stability Statements following Financial Stability Committee meetings. The Financial Stability Report will also be published twice a year.

The pursuit of a strong, resilient and inclusive financial sector that effectively contributes to economic sustainability and the betterment of Malaysians is a collective effort. In this endeavour, the Bank will continue to work with the industry and other stakeholders in the coming years to turn plans into reality and commitments into action.

Governor Muhammad bin Ibrahim, *FCB*

28 March 2018

Key Highlights on
Financial Stability and Payment Systems in 2017

Domestic financial stability continued to be preserved

Risks to financial stability were largely contained

- Moderated growth of household debt
- Low and stable default risk of Malaysian corporations
- Pick-up in deposits growth
- Improved onshore FX liquidity
- Strong market support from domestic institutional investors

Financial institutions maintained strong buffers

Banking Sector

CET 1 capital ratio	13.3%
Net impaired loans ratio	1.1%
Loan loss coverage ratio	115%

Insurance and Takaful Sector

Capital adequacy ratio	234%

Financial intermediation activities remained supportive of the economy

Businesses and households continued to have access to financing

Annual growth

Total outstanding financing	4.1%
Financing to households	5.1%
Financing to SMEs	6.0%

Approval rate

SMEs	77%
Residential properties	73%

Insurance and takaful solutions expanded for the wider society and economy

Annual growth

Premiums and contributions	3.5%

New innovations in 2017

- **Simple & affordable products** for the B40 segment
- **Direct distribution channels** for pure protection products
- **Greater pricing differentiation** for fire & motor protections

Further progress made in e-payments

Growth since 2011

- **more than 2x** increase in e-payment transactions per capita
- **42%** decline in cheque usage
- **almost 2x** number of POS terminal
- **more than 6x** increase in debit card transactions volume

Various initiatives introduced to develop and strengthen the industry

- Karnival Kewangan
- eKYC for remittance
- imSME
- Employee Screening
- Value-based Intermediation
- eCCRIS
- Regulated short-selling
- Dynamic FX hedging
- Responsibility Mapping
- Open API

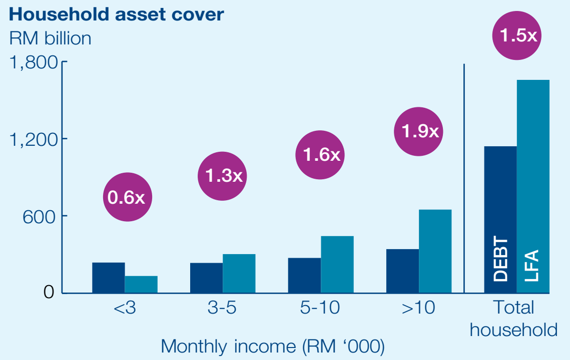
Source: Bank Negara Malaysia

Key Highlights on Box Articles

Preserving resilient households; expanding financial access

Indebted to Debt: An Assessment of Debt Levels and Financial Buffers of Households

Healthy household financial position with sufficient liquid financial assets (LFA) to cover debts; though lower income groups are more vulnerable to shocks



94% of borrowers have **positive financial margin**

more than 1.2 times **coverage of potential losses** under severe stress scenarios by banking system buffers

AKPK – Advancing Prudent Financial Behaviour

Strengthening the resilience of households through proactive interventions and financial education

683,169 individuals received financial counselling

Borrowers with a total debt value of **RM21.7 billion** are being assisted under the **debt management programme**

Financial education for B40 and M40 | university students | retirees

Expanding Insurance and Takaful Solutions for the Underserved Segment

Financial safety net expanded through simple and affordable protection solutions for the wider society

Key features of Perlindungan Tenang (Mampu & Mudah)

- Affordable pricing
- Provides good value
- Widely accessible
- Easy to understand
- Easy to purchase and make claim

Elevating the talent quality and professionalism of the industry

Financial Sector: Employment Conditions and Preparing the Workforce for the Future

A more productive, higher-skilled and agile workforce is required to meet the emerging needs of the future

Five imperatives for building the financial sector workforce of the future

1. **Strengthen** | core competencies and professional standards
2. **Identify** | types and number of jobs at risk of displacement
3. **Incorporate** | consideration of the transition of staff into new roles within business plans
4. **Expand** | talent pool diversity
5. **Enhance** | data quality and transparency to support talent management

Strengthening Conduct and Culture in the Financial Industry

Uncompromising standards of integrity and professionalism are critical to preserve public trust and confidence

Two-pronged approach to influence the conduct of individuals within the industry

1. **Individual** | Robust screening
2. **Contextual** | Codes of conduct; Whistleblowing; Enforcement; Culture supervision; Accountability; Professionalisation; Remuneration

Source: Bank Negara Malaysia, Agensi Kaunseling dan Pengurusan Kredit

Executive Summary

Executive Summary

Risk Developments and Assessment of Financial Stability in 2017

The global economy and financial markets were influenced by major policy developments in several key economies, volatility in commodities markets and geopolitical risks. Against this global setting, domestic financial stability continued to be firmly supported by sound financial institutions, and deep and liquid financial markets which facilitated the smooth functioning of financial intermediation activities. Compared to 2016, the direction of credit and contagion risks remained broadly unchanged in 2017. Indicators of market, liquidity and funding risks were lower.

Risks to financial stability from elevated household debt levels continued to recede. The growth in household borrowings moderated for the seventh consecutive year and is now more in line with income growth. Against the stronger performance of the domestic economy, the ratio of household debt-to-gross domestic product declined further to 84.3% (2016: 88.3%). Underlying trends in debt accumulation by households also continued to improve. First, the growth of unsecured borrowings in the form of personal loans has been sharply lower than that observed in earlier periods (2017: 2.5%; 2008: 25.2%). Second, the debt servicing ratios of most households remained within prudent levels (median: 32.7%). Third, the growth in household financial assets (8.6%) outpaced that of debt for the first time since 2012. Despite these positive developments, lower income households could continue to face challenges in meeting debt repayments amid higher costs of living. Given that debt levels are still elevated, the series of macroprudential measures implemented since 2010 remain relevant in their current form.

In the property market, excess supply in the office space and shopping complex segments is a concern. While business conditions are improving, incoming supply of new office space and shopping complexes is expected to significantly outstrip demand in the medium term. This will continue to exert downward pressure on occupancy and rental rates. Banks have become more cautious in lending to these segments and have sufficient buffers to absorb potential losses arising from property price corrections. Notwithstanding this, concerted efforts to avert deeper imbalances in the office space and shopping complex segments are important to contain spillovers to other parts of the economy.

The financial positions of non-financial corporations (NFCs) remain healthy. At the aggregate level, the increase in leverage of NFCs has been supported by strong and improving debt servicing capacity. Residual risks in the oil and gas, and real estate segments are not expected to have a significant impact on financial institutions. Overall default risk of Malaysian corporations remains low and stable.

In the financial markets, a number of factors are contributing to greater stability. A larger proportion of non-resident investors in the bond market are stable, long-term investors. Strong domestic institutional investors continue to provide the necessary support to domestic financial markets during periods of heightened portfolio flows, thus preserving orderly market conditions. Following three series of measures introduced by the Financial Markets Committee (FMC) since December 2016, onshore foreign exchange (FX) liquidity has also improved, driven by a more balanced foreign currency demand and supply.

Overall liquidity and funding conditions were bolstered by a stronger pick-up in the growth of deposits. Banking system liquidity placed with the Bank which is available to meet liquidity needs rose to RM176.2 billion. Banks have also continued to diversify their funding base to include more stable medium-term instruments as a source of funds in anticipation of the implementation of the Net Stable Funding Ratio (NSFR). This, together with a high level of compliance with the Liquidity Coverage Ratio will further strengthen banks' resilience to liquidity stress.

Contagion risks from domestic non-bank financial institutions, and the external exposures and overseas operations of banks remained low and broadly unchanged. As in previous years, external exposures of the Malaysian banking system largely reflected centralised liquidity management practices and capital funds held to meet local capital requirements for banking operations. Domestic banking groups continued to expand their overseas operations in the region in line with the growing investment linkages within Asia. These operations continue to be supported by strong capitalisation and stable funding structures.

Based on stress tests conducted by the Bank, the Malaysian financial system is expected to remain resilient under severe market, credit, and funding and liquidity shocks. The Bank remains vigilant of external developments, including tighter global financial conditions that could lead to increased financial market volatility. Potential risks arising from the growth in financial technology and cyber threats will also shift into sharper focus.

Banking Sector

The banking sector's profitability improved, reflecting the slower growth in interest expenses and higher fee-based income from financing-related activities and stock broking activities. Average returns on equity and assets rose to 13% and 1.5% respectively. Conservative earnings retention policies contributed to higher capital buffers maintained by the banking sector, with all banks reporting capital ratios well above the minimum regulatory requirements.

Outstanding financing by banks grew 4.1% to RM1,584.4 billion in 2017, driven mainly by financing to households and small and medium enterprises (SMEs). In particular, growth in financing to SMEs remained healthy at 6%. Recognising the strategic importance of development financial institutions (DFIs) in financing and developing key economic sectors, the Bank has started to engage with DFIs to improve performance measurement frameworks in order to better capture the development impact of DFIs.

In promoting financial inclusion, technology featured more prominently in initiatives to improve access to financial services for those currently unbanked and underserved. This included the introduction of cashless clusters in designated communities leveraging on e-payments and the launch of Malaysia's first financing referral platform which provides a one-stop online access point to financing solutions and funds for SMEs. The Bank also introduced eCCRIS, enabling individuals and businesses to conveniently access their own credit histories online.

The domestic implementation of Basel III standards continued to be a key focus of regulation and supervision. The Leverage Ratio requirement took effect on 1 January 2018. The Bank also published proposals for the implementation of the NSFR, which will be implemented no earlier than 1 January 2019. In 2018, the Bank will communicate plans and further proposals for the implementation of the remaining Basel III requirements in Malaysia, including reforms to the capital framework that were recently finalised by the Basel Committee on Banking Supervision. This will take into account the features and risks specific to the domestic financial system. Another key development was the issuance of strengthened standards on the management of credit risk. This also serves to provide a strong foundation for the implementation of new financial reporting standards on impairment (Malaysian Financial Reporting Standards 9) by financial institutions.

The Bank's supervisory framework was enhanced in 2017 to accord greater emphasis on organisational culture. This reflects growing concerns that a weak or indifferent culture within banks towards risks and ethical conduct can significantly undermine confidence in the banking system. Banks reported that 65% of losses from operational risk events were due to internal causes including internal fraud, regulatory non-compliance and operational lapses. Culture also has an important influence on risk-taking behavior within banks. In assessing the key drivers of organisational culture, the Bank takes into account both financial and non-financial aspects, including a bank's business model and structure, performance management and incentive systems, and the impact of control functions and internal interactions on behaviour. Industry-driven efforts to elevate professional standards in the banking sector have gained traction, with almost 200 senior officers and directors of banks enrolled in the Chartered Banker programme offered by the Asian Institute of Chartered Bankers (AICB). From 2018 onwards, key personnel in credit, compliance (including AMLA compliance), risk management, and audit functions will be required to obtain specialised qualifications from AICB.

Insurance and Takaful Sector

The insurance and takaful sector maintained positive growth underpinned by strong overall capitalisation. Growth was mainly driven by investment-linked and credit-related business in the life insurance and family takaful sector, respectively. The general sector in contrast experienced a marginal contraction, weighed down by contraction in the offshore-oil segment despite observed growth in other main classes of business. The industry as a whole remained profitable, with the life and family sector continuing to generate surpluses. Profits were however lower in the general sector due to higher claims experience recorded in the motor and medical lines of business.

The life insurance and family takaful penetration rate remains low, increasing only marginally over the last four years. Unsurprisingly, penetration is lower in the Bottom 40% household segment with only 30.3% owning a life insurance or family takaful policy. To increase penetration, *Perlindungan Tenang*, an initiative to make available products that are affordable, of good value, accessible, and simple, was launched. As at end-2017, 10 products were introduced under this initiative, which are also accessible through broader channels including bank branches, the internet and mobile platforms.

Two major components of the Life Insurance and Family Takaful Framework were implemented in 2017. The industry has started to offer pure protection term life insurance and family takaful products through direct channels, in particular through the internet. This aims to offer lower-cost alternative protection products to the public, while increasing reach to encourage a higher take up of insurance and takaful. This development has been accompanied by the emergence of product aggregators which allow consumers to easily compare between product offerings. After a pilot run of one and a half years, the Balanced Scorecard Framework for the agency force also came into effect on 1 January 2018 as planned. This will incentivise higher standards of productivity and professionalism among agents, in turn lifting their income potential. In parallel with these developments, broader initiatives are being pursued by the Bank to raise standards of professional integrity and ethical behaviour among other insurance and takaful intermediaries.

The general insurance and takaful sector entered into the second phase of the liberalisation of the motor tariff. With the liberalisation of premium rates for comprehensive and third party, fire and theft policies since 1 July 2017, premiums have begun to adjust to better reflect the underlying risk profile of drivers. Further differentiation in premiums is expected moving forward as insurers and takaful operators adopt a wider set of risk factors in setting premiums. Liberalisation has also facilitated broader product options for vehicle owners and ushered in technological innovation, most notably the use of motor telematics which rewards lower-risk drivers based on driving behaviour. The Bank continues to monitor developments to ensure that the liberalisation continues to proceed in an orderly manner.

The adoption of new financial reporting standards for insurance contracts (Malaysian Financial Reporting Standards 17) will introduce important changes to current approaches for reporting the performance of insurers and takaful operators. Preparations by the industry to implement the standards, which will come into force on 1 January 2021, will intensify in the coming years. The Bank has also initiated a review of the Risk-Based Capital Framework to ensure that capital requirements remain fit-for-purpose. The review, which will be conducted in phases beginning 2018, intends to reflect market developments and global regulatory and accounting standards, including MFRS 17.

Islamic Finance Development

The Islamic finance industry maintained healthy levels of profitability and capitalisation in 2017. Islamic financing grew by 9.4%, driven mainly by home and SME financing. Similarly, the takaful sector saw net contributions increase by 9.5%.

The industry advanced the Value-Based Intermediation (VBI) initiative, which promotes a new paradigm for finance embodying the intended outcomes of Shariah. The VBI principles advocate finance that advances social good and prevention of harm to the broader society and environment through the alignment of business practices of Islamic financial institutions. In support of this initiative, the Bank and the industry have jointly developed aspirations for the implementation of VBI in Malaysia. This is being further complemented by the establishment of a Community of Practitioners (CoP) comprising nine Islamic banks to pursue collaborative efforts by the industry to execute VBI strategies. VBI is also being realised through a greater and direct involvement of Islamic banks in social finance. The Islamic banking industry and 10 State Islamic Religious Councils have entered into arrangements to modernise collections, investments and disbursements of *waqf* (endowment) funds. Fund returns will be channeled into economic empowerment, education and health projects.

Progress has also been made in investment accounts. During the year, the Bank issued additional guidance to ensure that investment accounts function as intended to promote risk sharing and expand the mobilisation of capital businesses. Investment accounts grew by 6.9%, amounting to RM78.7 billion. Of this, funds raised and intermediated through the Investment Account Platform quadrupled to RM95.3 million in 2017, supporting business ventures in several industries.

In takaful, further progress was made to encourage innovation and support growth. The Bank is developing a regulatory framework that will facilitate the offering of trade credit takaful to meet the needs of businesses. An automated mechanism for takaful operators to expedite the processing of death claims will be launched in 2018. Additionally, the industry moved closer to developing a retakaful pool to expand the industry's underwriting capacity, thus reducing reliance on conventional reinsurance.

At the core of the Bank's Islamic finance initiatives is the ongoing effort to strengthen Shariah understanding and compliance. The Bank further reinforced end-to-end Shariah compliance with the publication of four additional Shariah standards. Comprehensive reviews of the Shariah Governance Framework and Takaful Operational Framework were also undertaken, ensuring that they remain relevant and commensurate with the growth and progress of the industry over time. The Bank's Shariah Advisory Council (SAC) continued to promote international harmonisation and mutual respect in Shariah. In conjunction with the SAC's 20th anniversary, the Bank launched a new website for the SAC as a repository of *fiqh* rulings and published compilations of the SAC's resolutions and the Bank's Shariah Standards.

The future of Islamic finance hinges crucially on the talent and professionalism of the workforce. The Bank introduced reforms to improve synergies among talent institutions and enhance the quality of talent offerings. The Certified Shariah Advisor and Certified Shariah Practitioner professional qualifications were launched in 2017, while the Chartered Professional in Islamic Finance accreditation will be rolled out in 2018. At the university level, an action-based learning approach was piloted by the International Centre for Education in Islamic Finance to equip students with greater applied knowledge and enable quicker time-to-competency when they enter the workforce. Through the Educator's Manual, the Bank also continued to embed Shariah standards within the university curriculum.

Cross-Sector Developments

Malaysia's debt securities market continued its upward trajectory in 2017, growing 10.1% to RM1.3 trillion or 97.6% of GDP. Despite more volatile capital flows, bond yields remained relatively stable, owing to the active participation of domestic institutional investors. Since the implementation of the FMC measures, onshore FX liquidity has improved considerably. Average daily trading volume in the onshore FX market increased to USD9.9 billion, up by over 20% from 2016, while the transaction volume of the ringgit non-deliverable forward market has contracted by 70% since November 2016. The more flexible hedging framework has also resulted in increased FX forward transactions by non-resident institutional investors. Importantly, the composition of onshore FX market transactions indicates that pricing is now mainly driven by real sector activities, rather than speculative transactions. Greater FX administration flexibilities provided under an expanded local currency settlement framework with the Bank of Thailand and a new local currency settlement framework with Bank Indonesia have also reduced the cost of doing business and further contributed to developing regional financial markets.

The legal and regulatory framework continued to be strengthened during the year to counter money laundering and terrorism financing (ML/TF) risks. The Companies Act was revised to improve transparency in the ownership of legal persons registered in Malaysia, while the Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA) was enhanced to broaden the scope of predicate offences relating to ML/TF risks. The Bank has also taken steps to extend AML/CFT obligations to digital currency exchangers, thereby improving the transparency of digital currency activities in Malaysia. Cooperation with regional authorities to counter terrorism financing was further reinforced with commitments to joint initiatives with financial intelligence authorities in Australia and Indonesia to address terrorism financing risks.

Reflecting a stronger focus by the Bank on conduct and culture within the financial industry, the Bank introduced requirements for financial institutions to consider the conduct histories (including disciplinary actions) of potential new hires as parts of the employee screening process. Requirements are also being developed to strengthen the individual accountability of those in significant senior roles within a financial institution. Given developments which have led to more extensive outsourcing by financial institutions in recent years, key improvements to the regulatory standard on outsourcing are being finalised to ensure that risk management practices for these arrangements remain robust.

In the area of consumer protection and empowerment, the formulation of the proposed Consumer Credit Act – a joint initiative between the Bank, the Ministry of Domestic Trade, Co-Operatives and Consumerism and the Ministry of Urban Wellbeing, Housing and Local Government – made further progress during the year. The proposed law will deliver more consistent standards in the level of protection afforded to retail borrowers and support the effective management of risks in the consumer credit market. Requirements for financial institutions to safeguard the confidentiality of customer information were also enhanced. In addition, the Bank is currently finalising specific proposals to promote the fair treatment of financial consumers through heightened expectations on the board and senior management to embed a culture of fair dealing and responsible behavior within the business.

It is equally important that consumers are empowered through education and accessible channels to exercise their rights. To this end, the Bank's public outreach efforts grew significantly in 2017. Over 75,000 people attended the Bank's Karnival Kewangan events held in Kuala Lumpur, Kota Kinabalu and Kuching to educate and inform the public on financial service and consumer rights. The public was also introduced to avenues available to address disputes with financial service providers. This included the Ombudsman for Financial Services, which has resolved 1,274 cases in the 15 months since commencing operations in October 2016. The proliferation of financial fraud schemes continued to be a concern. Following reviews by banks of accounts associated with the names of individuals and companies published on the Bank's Financial Consumer Alert, 884 accounts were closed during the year to prevent abuse of the financial system for fraudulent activities. The Bank also intensified efforts to alert the public to financial fraud schemes and steps that they should take to protect themselves against falling victim to fraud.

In the money services business (MSB) sector, growing usage of electronic remittance services (e-remittances) has become an important enabler for the migration of remittances from informal to formal channels. The Bank estimates that informal remittance reduced by about 8% in 2017. To further accelerate the migration to formal channels, the Bank has issued standards to enable e-remittance service providers to digitally on-board new customers while maintaining adequate standards of AML/CFT measures. This is expected to boost the market share of e-remittances which remains small at 12.3% of total remittances. Another key factor to encourage greater migration to formal channels is public awareness and education. In this regard, Project Greenback 2.0 in Johor Bahru – a collaboration between the Bank, the World Bank and the city of Johor Bahru – concluded a two-year pilot project in Malaysia that reached over 35,000 foreign workers and 3,700 SMEs. This contributed to a significant increase in the value of outward remittances in Johor Bahru through formal channels by 156% and 21% respectively for remittances by foreign workers and SMEs.

The implementation of the Regulatory Sandbox in October 2016 to provide a conducive environment for fintech innovation continues to receive strong interest from both financial institutions and fintech companies. New solutions in the areas of digital money services, insurance product aggregation and biometric authentication have been admitted for live testing. Experience from the Sandbox has been pivotal in enabling the Bank to determine appropriate regulatory approaches that would facilitate innovation while preserving adequate safeguards for the protection of consumers and financial stability and integrity. The Bank also collaborated with the industry to develop industry-wide infrastructure and standards in high-impact areas such as open application programming interfaces (API), a common Know-Your-Customer utility and distributed ledger technology (DLT). Alongside new technological adoptions, greater focus is being given to strengthen cybersecurity practices.

Payment and Settlement Systems

The payment and settlement systems remained resilient and operated without any major interruptions throughout the year. To mitigate cyber risk to key payment infrastructures, financial institutions have taken steps to comply with enhanced security controls, including those published by Society for Worldwide Interbank Financial Telecommunication (SWIFT), to fortify the local operating environment.

As part of the Bank's drive towards a cashless society, measures have been actively implemented to correct price distortions, enable a greater degree of competition, and establish market incentive structures to promote innovation and investments in payments infrastructure. These have been supported by extensive public awareness initiatives to encourage and accelerate the migration to e-payment. The financial system continued to make good progress in 2017. The number of e-payment transactions per capita has more than doubled to 111 (2011: 49) while cheque volume has declined by 41.9% to 119 million or four cheques per capita (2011: 204.9 million or seven cheques per capita). The number of point-of-sale terminals has expanded rapidly and the volume of debit card transactions increased by more than six times to 162.3 million transactions or 5.1 transactions per capita (2011: 25.1 million transactions or 0.9 transactions per capita). A major milestone in 2017 was the smooth transition from signature to the more secure PIN-based payment cards on 1 July 2017, which was achieved without disruptions to payment transactions.

In 2018, the Bank will focus on initiatives to promote mobile payments to complement debit cards in displacing cash. An area of primary focus will be the operationalisation of the Interoperable Credit Transfer Framework (ICTF). By ensuring fair and open access to a shared payment infrastructure by banks and non-banks, the ICTF is envisioned to drive greater competition, spur the development of innovative payment services to cater to the needs of different customer segments, and foster greater financial inclusion.

Risk Developments and Assessment of Financial Stability in 2017

Risk Developments and Assessment of Financial Stability in 2017

OVERVIEW

Domestic financial stability continued to be preserved and well-supported by sound institutions and orderly financial market conditions

The Malaysian financial system remained resilient and efficient in supporting financial intermediation activities and meeting the needs of the real economy. During the year, policy developments in the United States (US), ongoing volatility in the commodities market and heightened geopolitical risks, continued to influence investor sentiments. Amidst these developments, domestic financial markets remained orderly, with the presence of long-term domestic and foreign investors providing stability and liquidity to markets. Financial institutions maintained strong buffers to weather potential shocks. Sound asset quality and profitability were observed, while liquidity and funding conditions remained conducive to finance the needs of businesses and households.

The Financial Stability Committee (FSC) of the Bank met four times in 2017. The FSC assessed that the risks to financial stability continue to be contained, with current macroprudential measures remaining appropriate (Diagram 1.1). Overall debt servicing capacity of borrowers was sustained. However, domestic debt levels remain elevated and heightened risks in segments of the property market continue to be a concern. Pockets of vulnerabilities persist among lower income households (generally those with monthly earnings below RM3,000); in the luxury high-rise residential, office space and shopping complex segments of the property market where oversupply is acute; and from exposures in the oil and gas (O&G), and real estate sectors. Indicators of stress in domestic financial markets trended lower for the year. Despite volatile two-way portfolio flows, domestic institutional investors (DIIs), including financial institutions provided the necessary support to domestic financial markets, thus preserving orderly market conditions. Liquidity and funding risks also improved on the back of a recovery in the growth of bank deposits coupled with continued efforts by banks to diversify and increase the stability of funding sources. In terms of contagion risks, the magnitude and nature of risk emanating from domestic non-bank financial institutions (NBFIs) and banks' external exposures and overseas operations remained low and broadly unchanged from the previous year.

The 2018 outlook for domestic financial stability is expected to remain positive

In 2018, domestic financial stability is expected to be preserved. For the household segment, managing the high cost of living will remain a challenge. However, favourable labour market conditions and continued income growth will continue to provide support to households' debt repayment capacity. In the property sector, the oversupply of luxury high-rise residential properties, office space and shopping complexes is expected to persist. If left unchecked, this could pose risks to macroeconomic and financial stability. In the business sector, uncertainties in the sustainability of oil prices will continue to weigh on the oil and gas industry, with major oil producers likely to remain cautious in spending in the upstream segment.

Based on the most recent stress tests conducted by the Bank, the Malaysian financial system remains resilient under severe credit, market, and funding and liquidity shocks. The Bank continues to be vigilant against risks from increased volatility in financial markets triggered by geopolitical developments, expectations of monetary policy normalisation globally and domestic factors. Potential risks arising from the growth in financial technology (Fintech) and cryptocurrencies will also be closely monitored. In addition, risks to the financial system arising from cyber threats, illegal financial schemes and market conduct developments will remain an important focus of the Bank's supervisory and enforcement activities.

Diagram 1.1: Direction of Risks that Impact Domestic Financial Stability

Risks to financial stability remain contained

			Direction of risks (2017 vs 2016)
Credit risk	Households	• Household debt continued to grow at a more moderate pace • Household asset growth outpaced debt • Despite weaker repayments by certain segments, the overall quality of lending to households was sustained	↔
	Property market	• House prices continued to increase but at a more moderate pace • Continued oversupply in the office space and shopping complex segments • Banks are assessed to be able to withstand a slowdown in property market	↔
	Non-financial corporations	• Financing remained supportive of the pick-up in total investment • Risks arising from foreign currency-denominated debt largely mitigated • Overall debt servicing capacity sustained despite persistent vulnerabilities in the oil and gas, and real estate segments	↔
Market risk		• Overall financial market stress was lower • The proportion of stable and long-term non-resident investors of Malaysian government bonds has increased • Financial institutions actively managed their market risk exposures	↓
Liquidity and funding risk		• Bank deposits grew at a stronger pace • Lower cost of funds • Banks continued to diversify their funding base to match asset maturity profile	↓
Contagion risk		Domestic factors: • No material change in the nature and magnitude of risk transmission from non-bank financial institutions External factors: • Regionalisation and centralised liquidity management practices remained a major driver of Malaysian banks' external exposures • Strong capitalisation and stable funding structure of the overseas operations of domestic banking groups	↔

↔ Stable   ↓ Decreased

Source: Bank Negara Malaysia

CREDIT RISK

Household Debt Grew at a More Moderate Pace

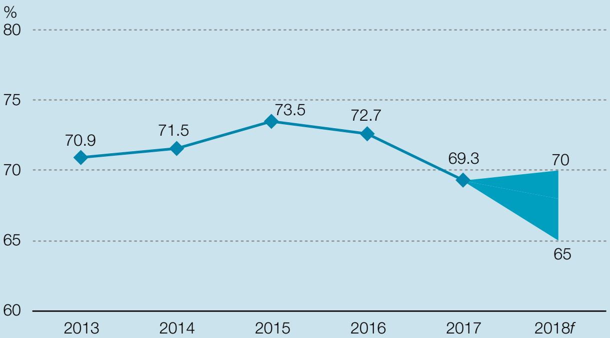
In 2017, the annual growth of total household borrowings[1] moderated further to 4.9% (2016: 5.4%; 2010: 14.2%) to RM1,139.9 billion. Banking system loans also grew at a slower pace of 5.1% (2016: 5.3%) (Chart 1.2). The moderation was due mainly to lower borrowings for personal use, and the purchase of motor vehicles and non-residential property (Chart 1.3). This reflects greater awareness on the importance of debt affordability and financial management, and more prudent borrowing among households. Expansion in housing loans, however, remained firm (8.5%; 2016: 9.1%), as eligible borrowers continued to have access to bank financing. The bulk of household debt continued to be acquired for wealth accumulation purposes. Almost two-thirds of household debt was secured by properties and principal-guaranteed investments, thereby substantially reducing net exposures on household debt. As a share of GDP, total household debt declined further, although it remained high at 84.3% (2016: 88.3%) (Chart 1.4). Excluding NBFIs, total banking system loans extended to households also trended lower to 69.3% of GDP (2016: 72.7%). In view of continued income growth amid improved labour market conditions, total banking system loans extended to households are projected to be within the range of 65% to 70% of GDP in 2018 (Chart 1.1).

On aggregate, the debt servicing capacity of households generally remained intact. The ratio of total household assets-to-debt remained high at about four times (2016: 3.8 times) (Chart 1.5). During the year, the growth of 8.6% (2016: 5.3%) in household financial assets outpaced that of debt for the first time since 2012 (Chart 1.6). In value terms, the increase in household financial assets (RM191.2 billion) more than tripled the increase in household debt (RM53.7 billion). This was supported by growth in deposits and unit trust funds which formed about half of household financial assets. The availability of liquid financial assets continues to provide households the flexibility to adjust to unexpected changes in income or cost of living, particularly in the urban centres. Excluding

[1] As extended by banks, development financial institutions and major NBFIs.

Chart 1.1: Household Sector – Household Debt-to-GDP Ratio Projection

Banking system loans are projected to be within 65-70% of GDP in 2018



f Forecast

Source: Bank Negara Malaysia and Department of Statistics, Malaysia

contributions to the Employees Provident Fund (EPF), the aggregate ratio of household liquid financial assets-to-debt stood at 1.5 times. However, analysis on a micro dataset point to some borrowers earning less than RM5,000 per month being more susceptible to shocks (refer to the accompanying box article 'Indebted to Debt: An Assessment of Debt Levels and Financial Buffers of Households' at the end of this chapter).

Financial institutions' exposures to vulnerable borrowers (those with monthly earnings below RM3,000) declined further, reflecting improvements in affordability assessments. Exposures to such borrowers, accounted for 19.9% of total household debt (2016: 21.9%; 2013: 28.4%) (Chart 1.7) or 17.4% (2016: 19.1%; 2013: 25.1%) of total banking system financing to the household sector. Half of this group's borrowings were in the form of fixed-rate financing (hire purchase and personal financing) which reduces their sensitivity to changes in the cost of borrowing. Borrowers in this group reported an aggregate leverage (measured as a ratio of outstanding debt to annual income) of 8.3 times (2016: 8.1 times), with close to 40% of the borrowings taken by this group for house purchases. Measures taken by the Government to improve access to affordable housing are therefore important to contain further debt accumulation within prudent levels.

Risks to financial stability arising from credit exposures to the household sector continued to be mitigated by sound credit underwriting standards and risk management practices. Over the years, strengthened loan affordability assessments have also mitigated the build-up of excessive debt burden among households. About three-quarters of borrowers with new loans approved in 2017 have debt service ratios (DSR) of less than 60% while the overall median DSR for outstanding financing is 32.7%.

NBFIs, which account for about 20% of total household debt, have demonstrated continued improvements in credit underwriting standards and risk management practices. Two of the largest NBFIs, which make up about 40% of total NBFI lending to households, are development financial institutions (DFIs) supervised by the Bank. The Bank also continued to collaborate closely with the Malaysia Co-operative Societies Commission (SKM) to promote improvements in loan affordability assessments, particularly among the medium- and large-sized credit co-operatives. The quality of NBFIs' household financing portfolio has been sustained with impaired and delinquent (loan-in-arrears of between one and three months) loans improving to 3% (2016: 3.1%) and 1.4% (2016: 1.7%), respectively.

Overall impaired loans and delinquencies for both banks and NBFIs remained low and stable at 1.6% (2016: 1.6%) and 1.4% (2016: 1.5%) of total household debt, respectively. Impaired loans and delinquencies for banks were lower at 1% (2016: 1.1%) and 1.4% (2016: 1.4%) of total banking system loans to the household sector, respectively. Impairments in financing for personal use and purchase of non-residential properties rose further compared to other categories of household debt. Higher impairments for personal financing were more pronounced among borrowers reliant on variable income sources. An uptick in impaired financing for the purchase of non-residential properties was driven by investments in office space and retail space in shopping complexes.

The Credit Counselling and Debt Management Agency (AKPK) continued to expand its outreach, providing financial counselling and advice to about 167,500 individual borrowers in 2017, including to customers of NBFIs. AKPK's Debt Management Programme (DMP) has seen an increase in the number of participants. The increase was driven mainly by borrowers earning less than RM3,000 per month who found it more difficult to cope with rising costs of living, compounded by poor financial planning. During the year, the Bank, together with financial institutions, industry associations, state government agencies and their affiliates, organised

Chart 1.2: Household Sector – Annual Growth in Debt

Household debt grew at its slowest pace since 2010

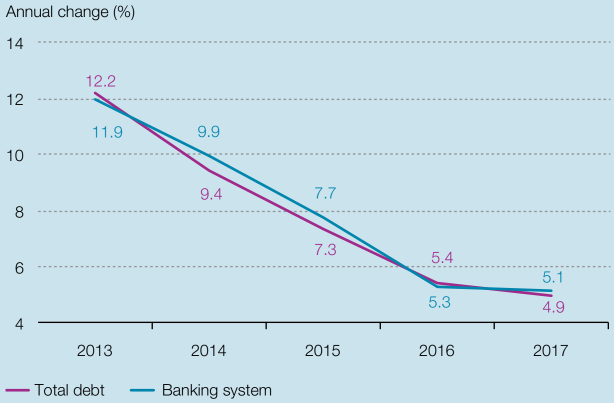


Chart 1.3: Household Sector – Contribution to Growth in Debt

Moderation was driven by lower debt for personal use, motor vehicles and non-residential properties

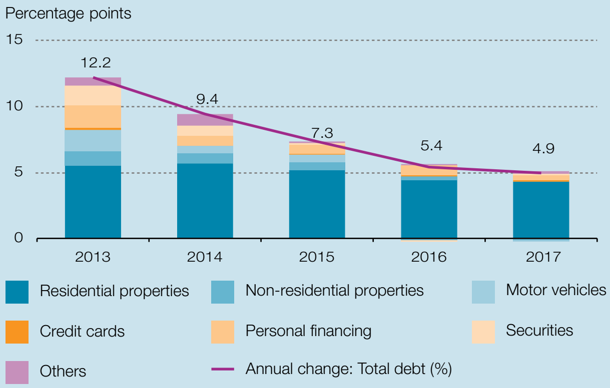


Chart 1.4: Household Sector – Key Ratios

Households maintained aggregate financial assets at more than two times of debt

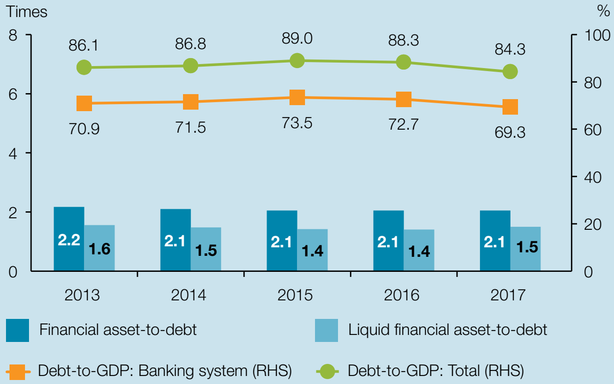


Chart 1.5: Household Sector – Composition of Assets

Including housing wealth, household assets stood at about 4 times of debt

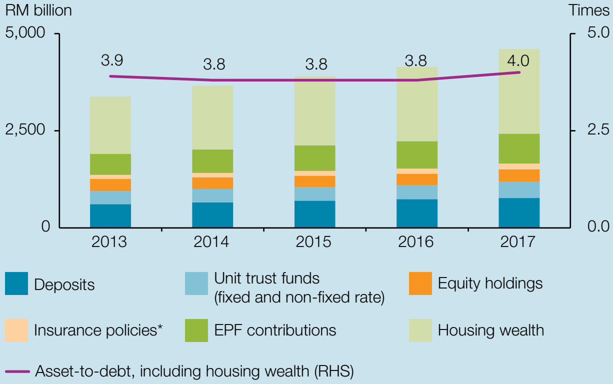


Chart 1.6: Household Sector – Debt and Financial Assets

Growth of household financial assets outpaced that of debt

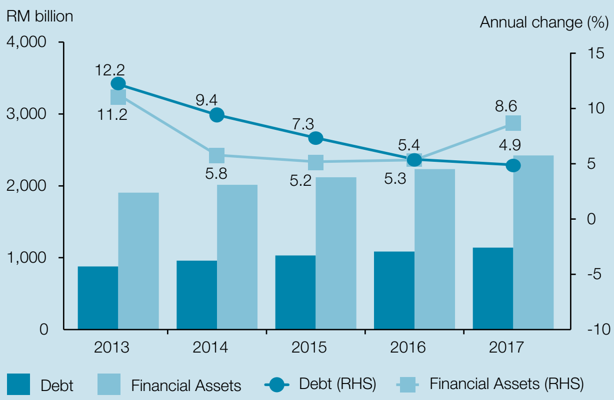
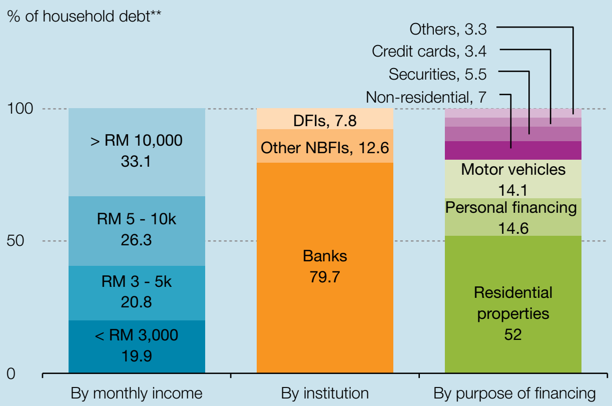


Chart 1.7: Household Sector – Profile of Borrowings

Share of borrowings by vulnerable borrowers is now below one-fifth of total household debt



* Surrender value

** Numbers may not necessarily add up due to rounding

Source: Bloomberg, Department of Statistics, Malaysia, National Property Information Centre, Securities Commission Malaysia and Bank Negara Malaysia estimates various outreach events such as *Karnival Kewangan* throughout Malaysia to increase awareness on prudent financial management and financial-related knowledge.

Existing macroprudential measures remain appropriate

The series of macroprudential measures implemented since 2010 remain relevant and have contributed to a more sustainable debt accumulation trend. While overall debt servicing capacity of households remained intact, the elevated level of household indebtedness and weaker repayment in some borrower segments present continued risks to household resilience.

Banks have sufficient excess capital to absorb potential losses from household portfolio under simulated stress events

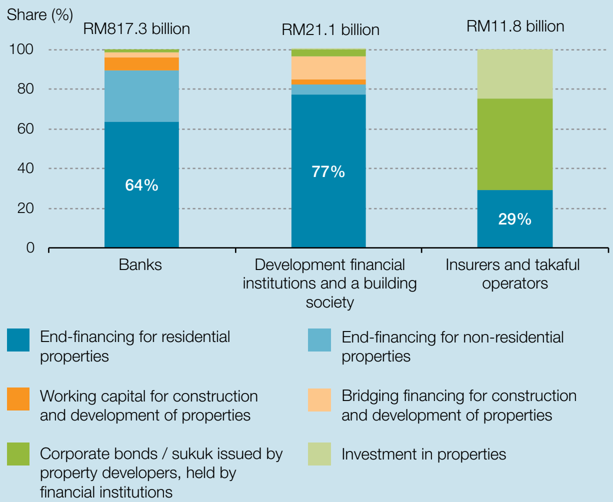
Potential losses to banks in the unlikely event of default incidences occurring simultaneously across all the different types of household borrowings under severe assumptions is estimated to be limited at RM57.6 billion (Table 1.1). Of this amount, potential losses arising from vulnerable borrowers are estimated at RM11.9 billion. This is well within the excess capital buffers (above the regulatory minimum) of RM134.8 billion held by banks. These potential losses have not taken into account available financial buffers of individual households or potential actions likely to be taken by banks to mitigate losses.

Despite Growing Imbalances in the Property Market, There are No Imminent Risks to Financial Stability

In 2017, total exposures of Malaysian financial institutions to the domestic property market expanded by 7.1% (2014-2016 average: 12.5%) to RM850.3 billion (Chart 1.8). The expansion was largely attributed to end-financing for the purchase of residential properties (5.3 percentage points).

Chart 1.8: Property Market – Financial Institutions' Exposures to the Property Market

Bulk of financial institutions' exposures are related to end-financing for the purchase of residential and non-residential properties



Source: Bank Negara Malaysia and financial statements of a building society

Table 1.1

Household Sector: Potential Losses in the Banking System Based on Severe Assumptions on Probability of Default (PD) and Loss Given Default (LGD)

		Residential properties	Motor vehicles	Personal financing	Credit cards	Total[1]
Stressed PD (%) (Baseline PD[2], %)		6.5 (1.6)	7.4 (1.9)	14.7 (3.7)	14.7 (3.7)	
Stressed LGD (%) (Baseline LGD[2], %)		40.0 (16.9)	75.0 (45.2)	95.0 (71.4)	95.0 (71.4)	
Potential losses (RM billion)	All borrowers	**12.7**	**8.1**	**9.6**	**5.2**	**57.6[3]**
	– Borrowers earning ≤ RM3,000 per month	1.5	2.3	2.4	0.7	11.9
	– Borrowers earning ≤ RM5,000 per month	3.7	4.5	4.3	2.0	22.4

[1] Includes other household loans such as financing for the purchase of non-residential properties and consumer durables
[2] Based on PD and LGD of banks adopting the Internal Ratings-Based (IRB) approach
[3] 42.8% of excess capital buffers held by banks

Source: Bank Negara Malaysia

Total exposures of Malaysian financial institutions to the domestic property market accounted for 27.4% (2016: 26.7%) of their total assets as at end-2017. Banks remained the largest lenders to the domestic property market. Out of the RM817.3 billion of banks' exposures to the property market, about 90% is related to end-financing for the purchase of residential and non-residential properties.

Residential Property Market

In the first nine months of 2017, the total value of housing transactions registered an annual growth of 2.6% (2016: -10.7%), with the volume of housing transactions recording a smaller decline of 6.1% (2016: -13.9%). This reflected the higher share of transactions for the purchase of houses priced above RM500,000 in both the primary and secondary markets. The average house price as measured by the Malaysian House Price Index (MHPI) continued to increase at a moderate pace of about 7% in the first half of 2017 (3Q 2017 preliminary: 5.1%; 2016: 7.1%; 2010-2014 average: 9.6%; 1990-2009 average: 5.5%).

Uptick in housing market activities observed, despite the high number of unsold residential properties priced at RM250,000 and above

Unsold housing units[2] increased on an annual basis by 22.7% (2016: 41%) to 129,052 units[3] as at end-September 2017. More than 80% of the unsold units were priced at RM250,000 and above. Many of these units were high-rise residential properties and were mainly in areas located far from major economic centres and with limited public transport facilities. The high number of unsold housing units also reflects the persistent mismatch between the selling price of houses being built and what most households can afford.

Houses remained unaffordable especially in key employment centres

Between 2013 and October 2017, 123,103 units of affordable homes have been built by the Government, with over one million units at various stages of construction or planning. The Government has also announced a freeze on the development of new luxury residential properties to rebalance the supply in the residential property market. Nonetheless, incoming supply of affordable housing remains insufficient to meet the rising demand from households. From January 2016 until September 2017, only 24% of new launches (25,124 units including those built by private developers) were priced below RM250,000. This is inadequate to meet the demand of about one-third of Malaysian households that can only afford houses priced below this level. The mismatch was exacerbated by the slower increase in median household income (CAGR 2012-2016: 9.6%) relative to median house prices (15.6%), rendering houses being seriously unaffordable[4] in certain parts of the country (for detailed information on housing affordability, refer to http://www.housingwatch.my/02_market_03_affordability.html).

A holistic solution is needed to quickly address the shortfall in the supply of affordable houses (refer to 4Q 2017 BNM Quarterly Bulletin, Box Article 1 on 'Affordable Housing: Challenges and the Way Forward'). A centralised authority mandated to rebalance the supply towards the affordable segment is crucial to support this objective. Such an authority can contribute towards better planning, minimising costs and achieving scale efficiencies in the development and allocation of affordable homes, especially by limiting duplicative initiatives and encouraging more efficient allocation of resources. Besides providing adequate affordable houses, it is also important to ensure that affordable housing projects are developed in locations with good public transport connectivity. For example, a transit-oriented approach to urban development that emphasises public transport connectivity between affordable housing projects and major employment centres would improve accessibility and ease the financial burden associated with the need to own a vehicle. In countries which have made significant progress in addressing the housing affordability issue, the provision of affordable housing has been supported by an integrated database which captures the demand and supply of affordable homes. The existence of a vibrant rental market as a viable alternative to home ownership, especially for the lower-income groups is

2 Unsold housing units include unsold houses that have been completed (overhang) and unsold houses currently under construction (Source: National Property Information Centre, NAPIC).

3 The figure includes small office/home office (SOHO) and serviced apartments (Source: NAPIC).

4 Based on the Median Multiple approach by Demographia International. For further information on the housing affordability methodology, please refer to the Box Article 'Demystifying the Affordable Housing Issue in Malaysia' in Bank Negara Malaysia Annual Report 2016.

also important to address this issue. The Government's Budget 2018 proposal to enact the Residential Rental Act is therefore a step in the right direction. Over the long term, the introduction of 'rent-to-own' schemes could also complement this. In November 2017, a domestic Islamic bank, partnering with several property developers, launched a private sector led 'rent-to-own' scheme for a range of residential properties. The scheme, which rides on the Islamic finance concept of *Ijarah* (leasing), provides house buyers the option to first rent, and purchase the house later.

Access to house financing remained available, especially for first-time house buyers

Sustained demand for affordable housing provided support for the continued expansion in end-financing by banks for the purchase of residential properties, despite the soft housing market conditions. As at end-2017, banks' financing for the purchase of residential properties expanded by 8.9% (2016: 9.2%; 2010-2016 average: 12.5%). A total of 515,021 (2016: 450,924) housing loan applications were received by banks in 2017. A majority (61%) of the applications were for the purchase of houses priced below RM500,000. The rejection rate of housing loan applications stood at 23.1%, below the 2012-2016 average of 26.1%. Key reasons for housing loan rejection include insufficient income to support debt repayment, adverse credit history, and inadequate income or financial documentation. The improvement reflects the greater alignment between bank lending standards and borrowing behaviour in line with the Policy Document on Responsible Financing. During the year, the Bank launched Housing Watch (http://www.housingwatch.my), to disseminate important information on the housing market, including home financing schemes, conditions in the housing market and consumer aids. Housing Watch serves as a credible source of information to assist potential house buyers to make informed purchasing decisions, complementing information offered through other sources.

The overall quality of banks' housing loan portfolio remained sound, supported by prudent lending and valuation practices. Supervisory reviews affirmed that banks remained vigilant in assessing the sustainability of borrowers' sources of income and financial commitments. Banks were generally cautious in financing the purchase of properties in less favourable locations, or being developed by property developers with weak financial standing. For such properties, lower margins of finance were observed for higher-priced units, with closer monitoring of collateral values. Close to 73% (2016: 64.9%) of outstanding housing loans have a loan-to-value (LTV) ratio of 80% and below, providing a comfortable buffer against negative equity (a situation where the market value of the house falls below the outstanding amount of the housing loan that it secures).

Speculative activities in the housing market remained subdued with the bulk of loans directed to first-time house buyers. Outstanding financing extended to first-time buyers for the purchase of houses priced below RM500,000 accounted for about 71% of total housing loan borrowers. The risk of significant price correction for such exposures remained limited due to sustained strong demand. In 2017, the number of borrowers with three and more outstanding housing loan accounts, a proxy for speculative purchases, grew by 0.9% (2016: 1.2%; 2010: 15.8%), accounting for less than 3% of total housing loan borrowers. The share of housing loans settled within three years, another gauge of speculative purchases, reduced further to 9.7% (2016: 11.8%) of total housing loans settled.

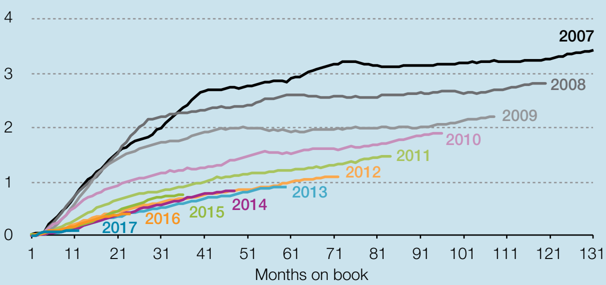
Overall vintage default rates for housing loans originated since 2007 continued to show improvement (Chart 1.9). This reflected the improving credit profile of housing loans in the banking system amid more prudent underwriting standards of banks. Housing delinquencies and impaired loans remained low at 1.3% and 1%, respectively (2016: 1.5% and 1.1%, respectively). Based on sensitivity analysis conducted by the Bank, banks' excess capital buffers are assessed to be sufficient to withstand potential credit losses from the property sector, including from exposures to property developers (refer to the Info Box titled 'Can Banks Absorb Potential Shocks from the Property Sector? A Sensitivity Analysis').

Non-residential Property Market

In 2017, banks' end-financing for the purchase of non-residential properties stood at RM213.4 billion (2016: RM209.1 billion), with an annual increase of 2.1% (2016: 6.1%) (Chart 1.10). Such financing accounted for 26.1% of banks' exposures to the property market or 13.5% of banks' total outstanding loans. End-financing for the purchase of shops accounted for the bulk (40%) of banks' exposures to non-residential properties or 5.4% of banks' total outstanding loans. Exposures (via end-financing) to

Chart 1.9: Property Market – Vintage Analysis for Housing Loans in the Banking System

Vintage default rates for housing loans originated since 2007 have shown improvement

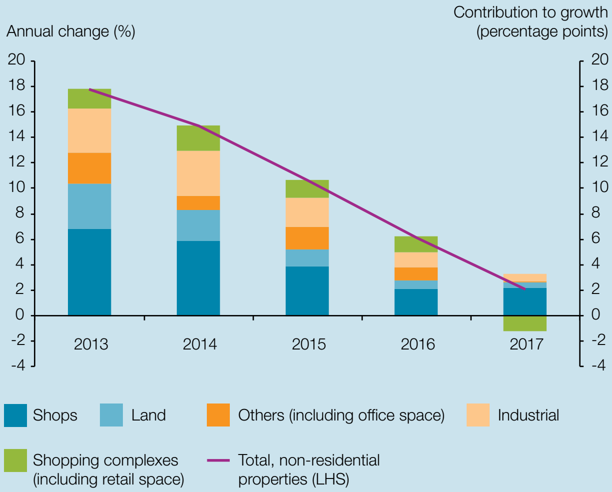


Note: Data include impaired loans written-off by banks

Source: Bank Negara Malaysia

Chart 1.10: Property Market (Non-residential) – Loan Growth and Contribution to Growth by Segment

Slower growth in banks' end-financing for the purchase of non-residential properties



Source: Bank Negara Malaysia

the office space and shopping complex segments, where oversupply is particularly acute, accounted for 3.2% of banks' total outstanding loans.

Activities in the commercial property segment (comprising shops, office space and shopping complexes) remained soft, amid an oversupply in these segments and challenges faced by businesses in the O&G sector. The volume of commercial property transactions declined by 8.2% (2010-2016 average: -4.7%) to 16,025 units during the first nine months of 2017. The value transacted nonetheless increased by 3.8% to RM17.8 billion, driven by higher transactions of properties priced RM1 million and above. Slower activities in the commercial property segment were observed in most major states such as Kuala Lumpur, Selangor, Johor and Penang.

Severe property market imbalances, if left unchecked, can pose risks to macroeconomic and financial stability

Risks remained heightened in the office space and shopping complex segments, given the oversupply situation. Based on the Bank's analysis, the incoming supply of 38 million square feet of new office space in Klang Valley is expected to drive vacancy rates to an all-time high of 32% by 2021 (1997: 5.1%; historical high in 2001: 25.3%), far surpassing levels recorded during the Asian Financial Crisis (AFC). Similarly, the incoming supply of 140 new shopping complexes by 2021 across Klang Valley, Penang and Johor is expected to worsen the oversupply condition in this segment. In 2016, major states such as Penang, Klang Valley and Johor already have higher retail space per capita (10.5, 8.2 and 5.1 square feet per person, respectively) relative to regional cities such as Hong Kong SAR and Singapore (3.6 and 1.5 square feet per person, respectively) (for detailed information on the oversupply situation of these segments, please refer to 3Q 2017 BNM Quarterly Bulletin, Box Article 2: 'Imbalances in the Property Market'). This will continue to exert downward pressure on occupancy rates and rentals.

As at third quarter of 2017, vacancy rates of shopping complexes increased moderately to 18.8% (2016: 18.6%; 2010-2015 average: 19.5%) despite rental rates remaining stable. Vacancy rates of office space declined to 16.8% (2016: 17.7%; 2010-2015 average: 16.3%). While overall business sentiment is expected to improve, risks remained heightened in the office space segment with continued cost-cutting measures by businesses, including downsizing of office space or relocating to lower-cost premises. The average rental rate of office space in the Klang Valley remained depressed at RM5.83 (2016: RM5.94) per square foot per month. In order to entice potential tenants, building owners have been willing to offer generous incentives, including rent holidays, which will further depress effective rental rates. Such practices have also been observed in prime office space located in other major employment centres. In general, new office buildings with good quality specifications, green certification and that are Multimedia Super Corridor (MSC) compliant have been in a better position to attract tenants.

There is an urgent need for coordinated actions by authorities, property developers, owners, and other stakeholders to reduce imbalances in the office space and shopping complex segments. This should include specific measures to manage the large incoming supply and improve occupancy of existing vacant space. Delay in addressing this issue may aggravate imbalances in the property market with spillovers to other parts of the economy.

Shops account for more than half (56%) of commercial property transactions, with about 60% of outstanding loans to purchase shops taken by individuals. Trends in this segment typically follow developments in the housing market given that shops are viewed as an alternative investment asset class to residential properties. In the first nine months of 2017, the number of shops transacted recorded a smaller decline of 7.4% to 8,918 units, compared to 9,629 units during the same period last year (January to September 2016: -29.4%; 2010-2016 average: -11.3%). Total value transacted grew by 0.2% to RM6.94 billion during the same period (January to September 2016: -35.3%; 2010-2016 average: -8%). Planned supply of shops continued to decline for the third consecutive year (3Q 2017: -37.7%; 2016: -17.9%). The lower supply of new shop units, to some extent, has contributed to the decline in the overhang of shop units thus containing the risk of oversupply in the near term. As at end-September 2017, the number of overhang shop units declined by 22% (2016: 20.1%; 2010-2016 average: 0.6%) to 3,811 units, with a similar trend observed across most price segments.

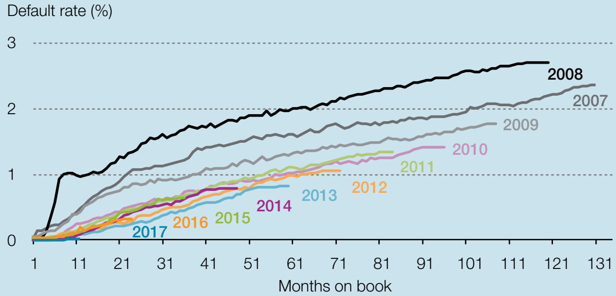
Speculative purchases of shops remained contained. The growth in the number of borrowers purchasing multiple shop units or combined shop and housing units continued to decline (2017: -0.7%; 2016: -0.6%). Such speculative purchases accounted for 7.3% (2016: 7.4%) of total borrowers of loans to purchase houses and shops. This reflects muted speculative activity in this segment, hence reducing the risk of sharp price adjustments in the future. The number of loans to purchase shops settled within three years, another indication of speculative purchases, declined to 12.3% (2016: 13.4%) of total loans to purchase shops that were settled during the year, well below levels observed in 2012 (close to 30%).

Arising from the oversupply situation, banks have become more cautious in lending to the office space and shopping complex segments, as reflected in the markedly lower loan approval rates for the construction and purchase of such properties (2017: 70.9% and 72.8%, respectively; 2016: 76.8% and 80.2%, respectively). Banks' current exposures to these segments in the form of loans and holdings of corporate bonds and sukuk amounted to about RM84 billion. These exposures accounted for 4.9% and 5.4% of banks' total outstanding loans, and holding of corporate bonds and sukuk respectively. Impaired loans ratio for the non-residential property segment remained low at 1.1% in 2017 (2016: 1%). Similar to housing loans, vintage default rates for loans to purchase non-residential properties originated across the years since 2007 continued to show improvement (Chart 1.11).

In general, banks are assessed to be able to withstand a broad property slowdown, including from the oversupply situation in the office space and shopping complex segments. Sensitivity analysis conducted by the Bank indicated that banks have sufficient buffers to absorb potential losses arising from property price corrections and its spillover to other industries that are highly dependent on the performance of the property sector (refer to the Info Box titled 'Can Banks Absorb Potential Shocks from the Property Sector? A Sensitivity Analysis').

Chart 1.11: Property Market – Vintage Analysis for Loans to Purchase Non-residential Properties in the Banking System

Vintage default rates of non-residential property loans originated since 2007 continued to improve



Note: Data include impaired loans written-off by banks

Source: Bank Negara Malaysia

Financing Remains Supportive of Business Activities, Amid Weaker Debt Servicing Capacity in Certain Sectors

In 2017, aggregate non-financial corporations' (NFCs) debt grew at a more moderate pace of 3.4% (2016: 9.1%) to RM1,394.3 billion or 103.1% of GDP (2016: 109.6%) (Chart 1.12). The growth was largely due to domestic borrowings, which represent 74.5% of total debt.

Can Banks Absorb Potential Shocks from the Property Sector? A Sensitivity Analysis

As demonstrated by Malaysia's own experience during the Asian Financial Crisis, adverse developments in the property market, if left unchecked, can have severe repercussions on financial stability. In this regard, and as part of the broader suite of macro-surveillance tools employed, the Bank conducted a sensitivity analysis to assess banks' ability to withstand shocks arising from a simulated sharp correction in the property market.

The sensitivity analysis simulates: (i) an increase in impairments to levels that are comparable to the worst default experienced by the industry (1997-2001); and (ii) a 50% decline in property prices i.e. a reversal of the five-year cumulative price growth since 2012. The shocks are applied not only on the end-financing portfolio of banks, but also on financing to industries that are highly dependent on the performance of the property sector – property developers and real estate services (including ancillary business activities such as legal and architectural); non-infrastructure construction; and building and construction-related materials (BCM) manufacturing sectors. In total, banks' overall credit exposures (including investments in bonds and sukuk) to the property market and such related sectors stood at RM933 billion or 52% of banks' total credit exposures as at end-December 2017.

Results of the analysis indicate that banks have sufficient buffers to absorb potential cumulative losses of RM85 billion arising from the direct exposure and spillovers to related sectors. Roughly one-third of the losses can be attributed to residential mortgages. Taking into consideration banks' earnings buffers, the overall common equity tier-1 capital ratio is expected to decline by 3.2 percentage points, remaining well above the minimum regulatory requirement.

Domestic borrowings of NFCs grew by 6.1%, underpinned by sustained corporate bonds and sukuk issuances in the capital market. Outstanding domestic bonds[5] expanded by 14.3% (2016: 7%), driven by higher issuances in the real estate, infrastructure and utilities sectors. Direct financing from banks and DFIs, which accounts for 44.6% of total financing to the overall business sector, grew more moderately with an annual growth of 1.3% (2016: 4.7%), reflecting slower growth in financing across most sectors. Total financing to SMEs also moderated to 5.3% (2016: 9.2%) due to slower growth in the mining and quarrying, real estate and construction sectors. Access to financing for most businesses remained generally favourable, with no sign of broad-based credit tightening. The rejection rates for sectors with weaker credit risk outlook, namely mining and quarrying and real estate, were slightly higher at 19.9% and 25.7%, respectively (2016: 16.4% and 20.5%, respectively).

Malaysia's total outstanding corporate external debt declined by 3.7% in 2017 (2016: 19.7%). The lower corporate external debt was mainly attributed to valuation effects following the strengthening of ringgit against most currencies. This was slightly offset by new borrowings. Corporate external debt accounted for 25.5% of total business debt or 26.3% of GDP.

5 Corporate bonds and sukuk excluding issuances by Cagamas, financial institutions and non-residents.

Sustained overall debt servicing capacity, amidst vulnerabilities in certain sectors

The financial position of Malaysian firms remained robust during the year. In 2017, the aggregate leverage[6] and debt servicing capacity[7] of Malaysian NFCs stood at 47% and 9.1 times, respectively (2016: 43% and 11.5 times, respectively) (Chart 1.14). The lower interest coverage ratio (ICR) was due to weaker earnings performance of some firms in the domestic-oriented sectors. The aggregate liquidity position of firms, as measured by the median cash-to-short-term debt (CASTD), improved to 1.5 times (2016: 1.2 times), mainly due to the export-oriented sectors.

Persistent vulnerabilities continued to affect the O&G-related and real estate sectors. In the O&G sector, business performance of firms in the sector improved from 2016, given higher average oil prices. However, the financial position of certain firms continued to deteriorate, particularly firms heavily exposed to the upstream segment. The median ICR for the sector, while lower, remained healthy at 2.9 times (2016: 5.4 times) (Chart 1.15). The liquidity position of firms in the sector continued to be weak with the median CASTD ratio

6 Leverage of NFCs is measured by the median debt-to-equity ratio.
7 Debt servicing capacity of NFCs is measured by the median interest coverage ratio (ICR).

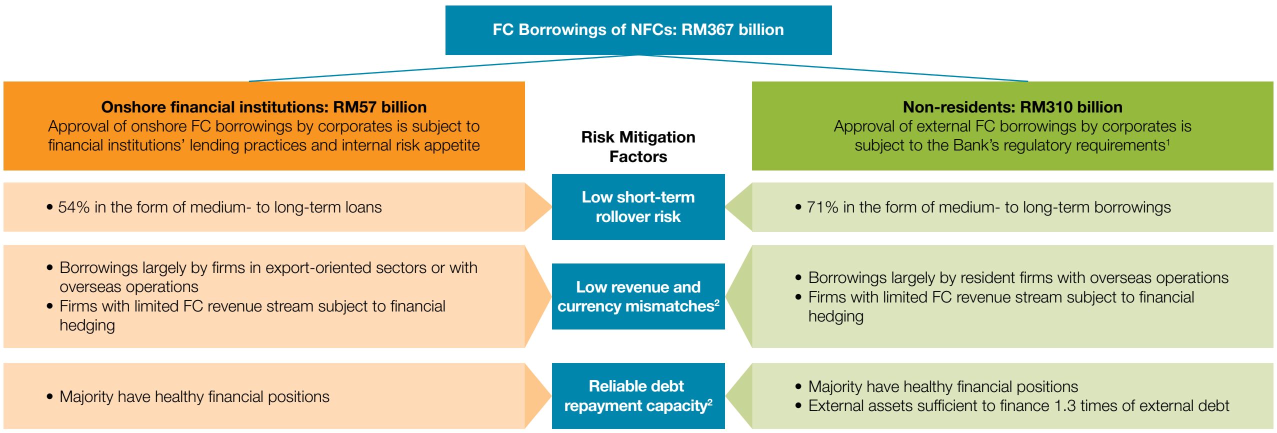
Risks from Corporate Foreign Currency Borrowings

In recent years, the share of foreign currency (FC)-denominated debt of NFCs has expanded in line with the increasing international presence of Malaysian corporations (refer to Chapter 1 of the 2017 Annual Report on External Sector). With NFCs expanding their operations abroad or acquiring foreign assets, FC borrowings (both onshore and offshore) accounted for 27.1% of GDP in 2017 (2012-2016 average: 25% of GDP) (Chart 1.13).

In general, a rapid increase in FC borrowings by corporates which is not supported by adequate FC revenue streams to meet debt repayment or insufficiently hedged against currency risks could pose adverse financial stability implications. FC borrowings from non-residents and onshore financial institutions accounted for 22.2% and 4.1% of total business debt in 2017, respectively (2016: 24.1% and 4.5%, respectively). Risks to domestic financial stability arising from both external and onshore FC-denominated corporate debt are largely mitigated, given the profile of the exposures and safeguards in place (Diagram 1.2).

Diagram 1.2: Profile of Corporate Foreign Currency Borrowings

Risks arising from FC-denominated corporate debt are largely mitigated



[1] Firms must obtain the Bank's approval for FC borrowings in aggregate amounts exceeding the equivalent of RM100 million from non-resident financial institutions, special purpose vehicles and other unrelated entities. Firms must be able to demonstrate adequate debt servicing capacity from FC revenue streams or through the use of financial derivatives to hedge against currency risks. Such borrowings must also be for productive purposes

[2] Based on a sample of top onshore and external FC borrowers

Source: Bank Negara Malaysia

at 0.5 times (2016: 0.8 times). In 2017, debt-at-risk (measured as the share of debt borne by firms with an ICR of less than two times) increased to 22.1% (2016: 18.2%) of total debt owed by O&G firms. Risks to domestic financial stability posed by exposures of financial institutions to O&G-related sectors remained small, with provisions against potential credit losses fully accounted for. Banks' domestic exposures (including off-balance sheet exposures) to firms in O&G-related sectors accounted for about 6% of domestic business exposures or 14.5% of total capital of the banking system.

Despite softer conditions in the property market, the debt servicing capacity of property developers continued to be supported by a reasonably healthy median ICR of 6.2 times on aggregate in 2017 (2016: 5.4 times).

However, profitability of property developers declined with operating margin at 16.2% in 2017 (2016: 18.0%). Similarly, smaller developers (property developers with total assets below the median total assets of players listed on Bursa Malaysia, accounting for 10% of total assets of listed players) recorded lower operating margins (2017: 8.2%; 2016: 9.4%). The liquidity position of property developers improved to 0.9 times (2016: 0.8 times). Debt-at-risk for the real estate sector increased to 12.4% (2016: 7.9%), for the 12 months ending December 2017. Risks to domestic financial stability arising from exposures to property developers remained minimal as illustrated in the sensitivity analysis (refer to the Info Box titled 'Can Banks Absorb Potential Shocks from the Property Sector? A Sensitivity Analysis').

Chart 1.12: Business Sector – Debt-to-GDP Ratio

Higher debt driven by new bond and sukuk issuances

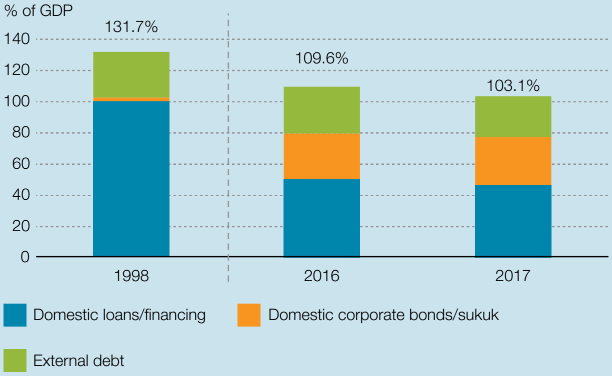


Chart 1.13: Business Sector – FC-denominated Debt Profile

One-third of FC-denominated borrowings are intercompany loans, which are on flexible terms

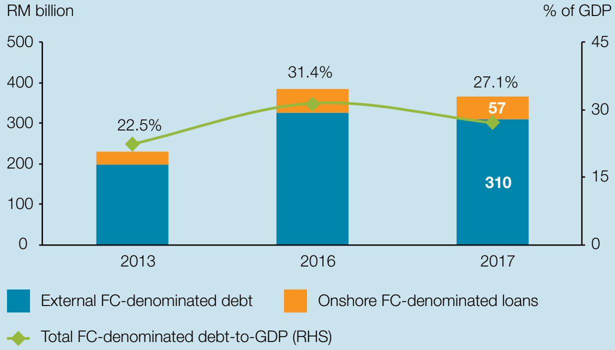
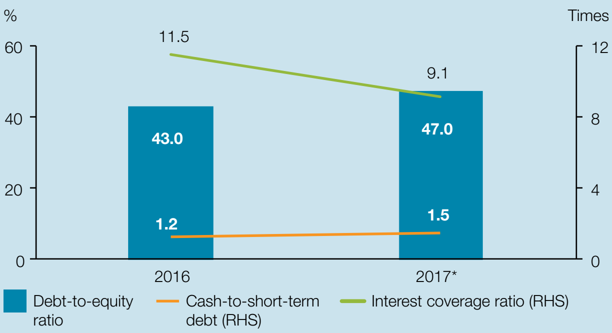


Chart 1.14: Business Sector – Leverage, Debt Servicing Capacity and Liquidity Indicators

Healthy financials continue to support debt servicing capacity

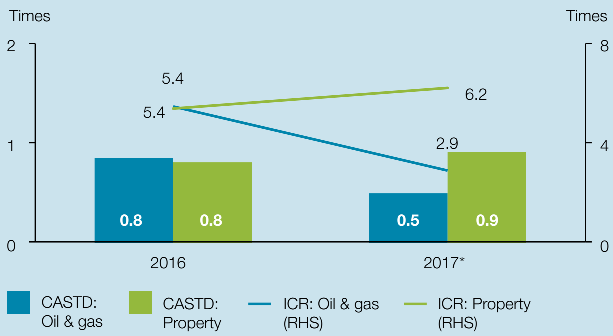


*Unaudited financial results

Note: Prudent thresholds for ICR and CASTD are two times and one time, respectively

Chart 1.15: Business Sector – Liquidity and Debt Servicing Capacity Indicators for Selected Sectors

Satisfactory debt servicing capacity of firms in sectors with weaker credit risk outlook



*Unaudited financial results

Note: Prudent thresholds for ICR and CASTD are two times and one time, respectively

Chart 1.16: Business Sector – Gross Impaired Loans and Gross Delinquent Loans

Overall quality of business loans remained strong

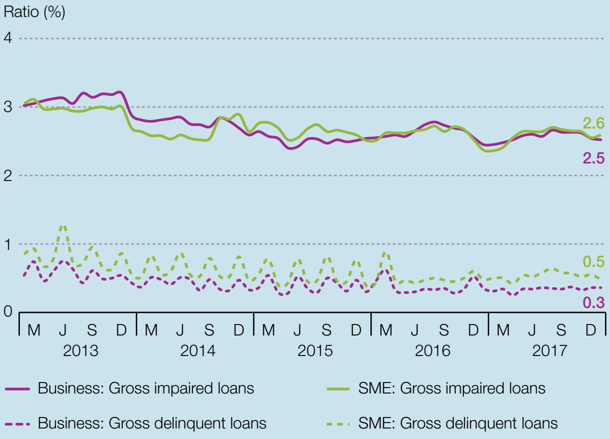
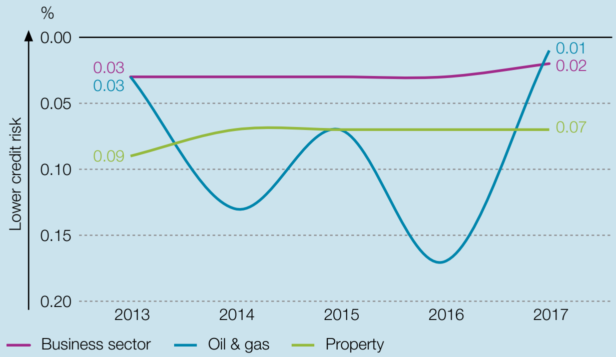


Chart 1.17: Business Sector – Credit Risk Outlook for Selected Sectors

Overall debt servicing capacity is expected to remain intact



Note: DRSK measures the probability of default over a one-year horizon. A value of 0.52% or lower is considered investment grade

Source: Bloomberg, Department of Statistics, Malaysia and Bank Negara Malaysia estimates

The overall quality of business loans in the banking system was sustained with impaired and delinquent loans low at 2.5% and 0.3% (2016: 2.5% and 0.4%, respectively) of total bank lending to businesses, respectively (Chart 1.16). However, the overall impaired loans ratio for the O&G sector, including restructured loans, remained elevated at 5.5% (2016: 4.2%). The increase in impairments was driven mainly by firms in the shipping-related segment of the O&G sector. While delinquencies remained low throughout the year (2017: 0.6%; 2016: 0.2%), further impairments could materialise given the persistent weak outlook for certain segments in the industry such as the drilling, fabrication and shipping-related segments. Impaired loans and delinquent loan ratios of the real estate sector remained low and stable at 1.5% and 0.3%, respectively (2016: 1.5% and 0.2%, respectively). These impairments were mainly from the real estate services segment, with banks already allocating sufficient provisions against potential credit losses.

Four domestically-rated corporate bonds and sukuk were downgraded during the year, compared to six downgrades in 2016. The downgrades were driven mainly by traditional media players impacted by the shift towards digital media platforms. These downgrades represented only 0.1% (2016: 1.3%) of total outstanding corporate bonds and sukuk.

In an effort to enhance debt resolution arrangements for the corporate sector, the Corporate Debt Restructuring Committee (CDRC) revised its minimum total outstanding debt threshold to RM10 million from RM30 million effective 1 September 2017. The revision will enable a wider group of companies, particularly mid-sized firms with viable business operations, to approach the CDRC for assistance to resolve their debt obligations.

The overall default risk of Malaysian corporations, based on the Bloomberg Default Risk measure (DRSK), remained stable at 0.027% (2016: 0.033%). This level is significantly lower than the peak of 0.170% observed during the Global Financial Crisis. The DRSK for both O&G and real estate sectors improved marginally in 2017 amid improvements in oil prices and the domestic property market in the second half of the year (Chart 1.17). Nevertheless, the outlook for the O&G and real estate sectors is expected to remain challenging in 2018.

Financial Stability Risks from Top Corporate Borrower Groups

NFC borrowers with substantial borrowings can have a considerable bearing on the stability of the financial system given interlinkages between the corporate and financial sectors. Ongoing monitoring of these NFCs enables early identification of risks that could spill over to the financial sector.

The top NFC borrower groups represent corporations with aggregate credit exposures (includes direct financing and holdings of corporate bonds and sukuk) exceeding RM1 billion with Malaysian financial institutions. Financial institutions' exposures to top borrower groups account for 42.2% of their exposures to the business sector in 2017 (2016: 42.9%).

The aggregate financial performance and debt servicing capacity of top borrowers were sustained in 2017. The median ICR and CASTD of top borrower groups remained above prudent thresholds at 6.7 times and 1.1 times, respectively (January-September 2016: 6.3 times and 1.2 times, respectively). Credit exposures to top borrower groups with ICR below the median declined to 11.2% (2016: 12.8%) of total business exposures of banks and DFIs, and 17.7% (2016: 18%) of business exposures of insurers and takaful operators.

The majority of top borrower groups are expected to be able to support debt repayments in the event of a substantial decline in profitability, significant weakening of the ringgit and higher borrowing costs. Under a scenario of simulated severe shocks (up to 30% depreciation in the ringgit, a 50% decline in operating profit, and a 100 and 150 basis points increase in borrowing costs for RM and FC borrowings, respectively), the cumulative potential credit losses from exposures to top borrower groups are estimated to remain comfortably within banks' excess capital buffers. These buffers currently stand at more than three times the estimated potential losses.

MARKET RISK

Domestic Financial Markets Remained Orderly Amid Lower Market Stress

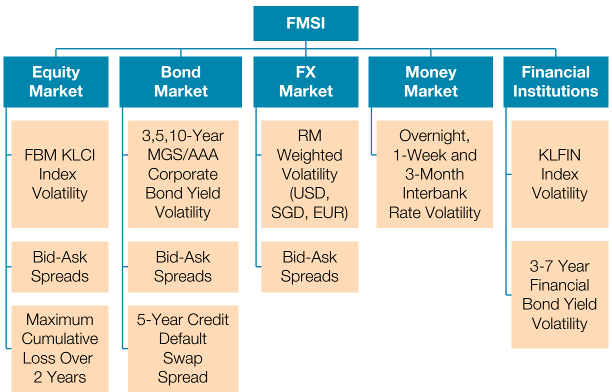
During the year, policy developments in the United States (US), volatility in the commodities market and heightened geopolitical risks, continued to induce bouts of volatility in global portfolio flows. Despite these external developments, the Financial Market Stress Index (FMSI), which measures the overall stress in domestic financial markets, was lower compared to 2016 (Chart 1.18). This was supported by improved investor and business sentiments amidst more favourable domestic macroeconomic conditions.

Domestic financial markets experienced several episodes of heightened movements in short-term portfolio investment flows during the year. Overall, net portfolio outflows in 2017 were lower at RM9.2 billion (2016: net outflows of RM15.4 billion) (Chart 1.19). Of this, resident investors recorded higher net portfolio outflows of RM16.5 billion (2016: net outflows of RM15 billion) amid their continued investments in both equity and debt securities abroad. Non-residents recorded net portfolio inflows of RM7.3 billion (2016: net outflows of RM408 million) as net inflows into equities offset net outflows from the government bond market. Inflows by non-residents into the equity market, particularly in the first half of 2017, was a positive development as annual net outflows have been

An Overview of the Financial Market Stress Index

The Financial Market Stress Index (FMSI) was developed in 2013[8] as a risk monitoring tool for the financial market. It measures current conditions in the domestic financial markets and allows different financial stress events to be compared over time. The FMSI captures financial stress in five domestic asset classes - the foreign exchange (FX), equity, bond, money markets and financial institutions (FIs). The indicators selected for the construction of the index take into account aspects relating to volatility, credit spreads, liquidity and valuation losses in different asset classes (Diagram 1.3).

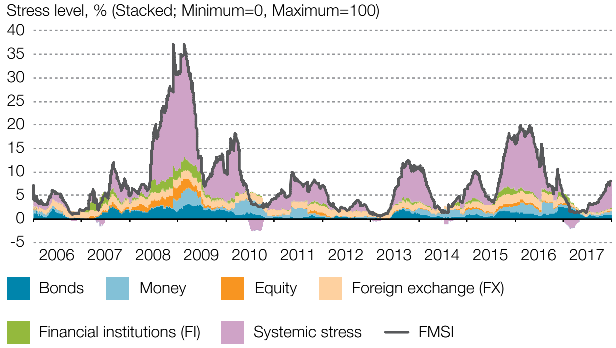
Diagram 1.3: FMSI Components



Source: Bank Negara Malaysia

Chart 1.18: FMSI Historical Trend

FMSI captures and delineates sources of stress



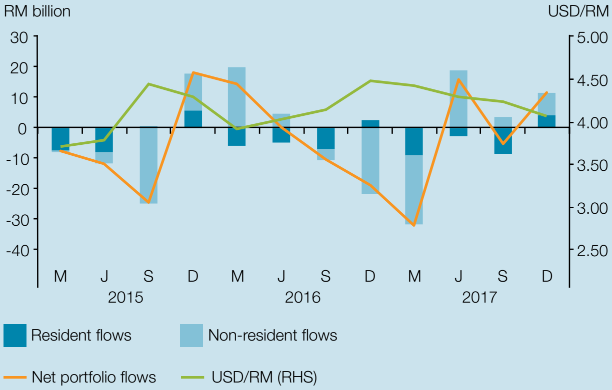
Source: Bloomberg, Reuters and Bank Negara Malaysia estimates

The FMSI also captures a systemic stress component, which measures cross-correlations among the different markets. An increase in systemic stress indicates that markets are moving together in a synchronised manner (higher asset cross-correlation). For example, during the period of protracted low crude oil prices in 2015, all markets were negatively impacted and the systemic stress component consequently increased. In contrast, a decline in systemic stress indicates that markets are moving in different directions. For instance, after the outcome of the US presidential election at the end of 2016, the systemic stress component declined into negative territory due to higher stress in the bond market amid increased non-resident outflows while the equity market rallied. For most of 2017, the FMSI indicated that market stress was lower than levels observed in 2016, in line with lower global volatility. The rising trend in domestic financial market stress from renewed global uncertainty, as observed at the end of 2017 was also anticipated and within the forecast range derived from the FMSI.

[8] It was developed based on the European Central Bank's (ECB's) Composite Indicator of Systemic Stress (CISS) Index.

Chart 1.19: Financial Market – Net and Gross Portfolio Flows and Ringgit Exchange Rate Movement

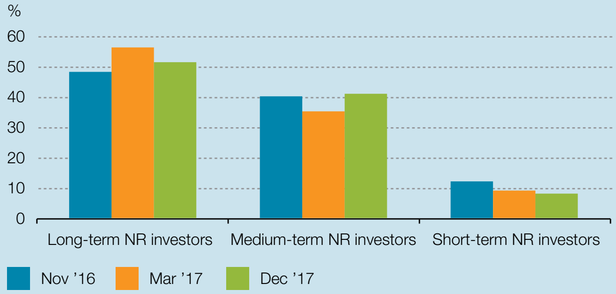
Resumption in portfolio inflows by non-residents led to appreciation of ringgit



Source: Department of Statistics, Malaysia

Chart 1.20: Financial Market – Distribution of Non-resident (NR) Holdings of Government Bonds

The bulk of the non-resident holdings in the bond market is attributed to long-term non-resident investors



1. Long-term NR investors: Central banks, governments, pension funds, insurance companies
2. Medium-term NR investors: Asset management companies
3. Short-term NR investors: NR banks, nominees and others

Source: Bank Negara Malaysia

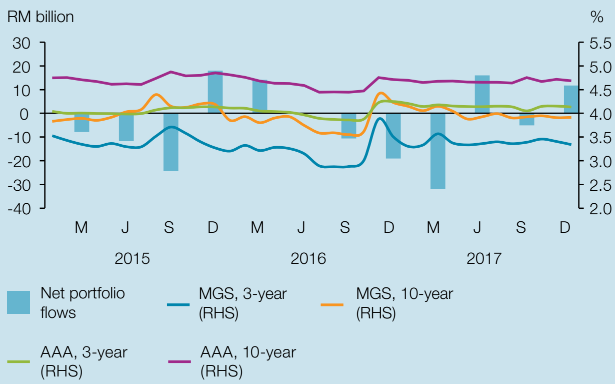
observed since 2015. In the government bond market, the outcome of the US presidential election in November 2016 led to an increase in non-resident outflows. This continued into the first quarter of 2017 as non-residents, especially short-term investors, continued to sell their positions in shorter-term government bonds (with maturity of less than three years) following the unwinding of non-deliverable forward (NDF) positions by non-resident financial institutions, heightened political tensions between the US and North Korea and expectations of higher interest rates in the US. The trend reversed from the second quarter onwards as non-residents resumed their purchases of Malaysian government bonds.

Non-resident holdings of Malaysian government bonds declined to 24.7% of total outstanding government bonds as at end-March 2017, before gradually rising to 27.7% (2016: 30.6%) by end-2017. The proportion of stable and long-term non-resident investors in the government bond market has also increased, contributing to greater stability in the market (Chart 1.20). A large proportion of these investors have continued to invest in the government bond market despite adverse external developments and are less affected by shifts in market sentiments. From November 2016 to March 2017, domestic institutional investors, including financial institutions, increased their government bond holdings by RM41.2 billion. The presence of these investors continued to provide support and liquidity to domestic financial markets, thus preserving orderly market conditions. Correspondingly, yields of Malaysian Government Securities (MGS) across the one- to 20-year tenures trended lower for most of the year with yields declining between 11 to 37 basis points since end-2016 (Chart 1.21). Market liquidity in the MGS market remained intact, with stable average bid-ask spreads at 0.1% of the mid-price (2016: 0.1%). In the corporate bond market, the proportion of non-resident investments remained low and stable at 3% of total outstanding corporate bonds (2016: 3.4%).

In the equity market, non-residents increased their holdings to 23.2% (2016: 22.3%) of total market capitalisation, supported by improving global and domestic macroeconomic conditions and the favourable

Chart 1.21: Financial Market – MGS Yields, Corporate Bond Yields and Quarterly Net Portfolio Flows

Lower bond yields attributable mainly to non-resident inflows



Source: Bank Negara Malaysia and Department of Statistics, Malaysia

ringgit outlook. The FBM KLCI ended the year stronger by 9.4% at 1796.81 points, in line with other regional equity indices. The price-to-earnings ratio stood at 16.2 times (2000-2017 average: 16.7 times). Similarly, market liquidity in the equity market remained intact with stable average bid-ask spreads at 0.4% of the mid-price (2016: 0.4%). Market-perceived sovereign risk, as reflected in the credit default swap spread for Malaysia, declined further to 58 basis points (2016: 137 basis points) by end-2017.

The ringgit appreciated by 10.4% against the US dollar to end the year at RM4.0620 (2016: USD1 = RM4.4860). The ringgit was the second-best performing currency in Asia, behind the South Korean won, which appreciated by 12.8% against the US dollar. Following the series of measures introduced by the Financial Markets Committee (FMC) since December 2016, onshore FX liquidity has improved, driven by more balanced foreign currency demand and supply. For instance, the dynamic hedging framework has resulted in increased FX forward transactions by non-resident institutional investors in the onshore market (refer to Chapter 5 for further details).

Active management of market risk exposures enabled financial institutions to manage the impact of volatile two-way portfolio investment flows

In general, there were no significant shifts in the market risk-taking behaviour of financial institutions. The overall treasury portfolio of banks expanded by 14% to RM421 billion or 16.5% (2016: 15.1%) of total assets, with the bulk of holdings in the banking book. The increase was mainly attributable to higher holdings of government and corporate bonds throughout the year. Banks maintained smaller trading book exposures in response to bouts of increased volatility in domestic financial markets (10.6% and 11.7% of total treasury portfolio in 2017 and 2016, respectively). Based on the interest rate sensitivity analysis, duration risk in the trading book remained low, with changes in market valuations estimated at RM4.3 million for ringgit securities and RM0.3 million for USD securities, for every one basis point change in interest rate. Overall, banks recorded net trading and investment gains of RM6.3 billion (2016: RM6.5 billion), which accounted for 17.3% (2016: 20.1%) of total profit before tax, mainly from net FX trading gains.

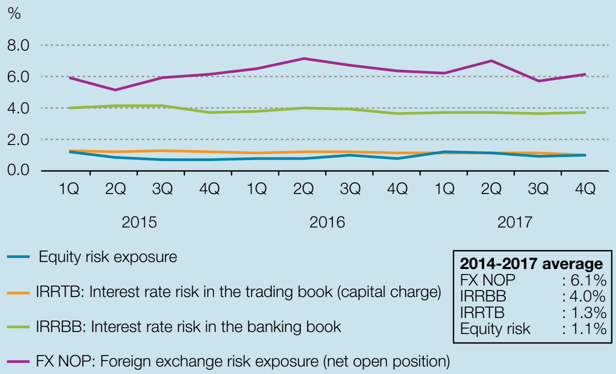
Market risk exposures of banks were slightly below the 2014-2017 average (Chart 1.22), remaining at levels well within prudent value-at-risk and loss limits set by individual banks. Total capital allocated against interest rate risk in the trading book was stable at 1% of banks' total capital, while exposure to equity risk remained minimal at 1% of total capital (2016: 1.1% and 0.8%, respectively). Interest rate risk in the banking book also remained stable at 3.7% (2016: 3.6%) of total capital. Overall FX risk exposures declined to 6.1% (2016: 6.3%) of total capital. Market risk issues were actively discussed at board and senior management level committees as part of ongoing risk management practices. Banks performed regular internal stress tests to gauge the potential impact of adverse scenarios on the adequacy of their capital and liquidity buffers. These stress test results were also used to review risk limits and for portfolio management and capital planning purposes.

The banking system continued to demonstrate the ability to withstand severe market shocks, supported by sound financial positions. Based on the latest market risk stress test conducted by the Bank, the post-shock aggregate total capital ratio (TCR) and CET1 ratio of the banking system were estimated to be at 15.9% and 12.1%, respectively, under severe market risk scenarios which include large yield shocks, steep equity declines and sharp ringgit depreciation against major currencies.

Insurers and takaful operators (Charts 1.23 and 1.24) also maintained prudent risk-taking with no material shifts in their market risk-taking behaviour. The treasury

Chart 1.22: Banking System – Equity, Foreign Exchange and Interest Rate Risks (% of Total Capital)

Market risk exposures of banks were below 2014-2017 average



Source: Bank Negara Malaysia

portfolio is largely held to match the liability structures of insurers and takaful operators, mainly comprising investments in corporate bonds (41% of total assets) and equities (19.5% of total assets).

Given their longer-term liability structure, life insurers and family takaful operators invested mainly in medium- to long-term corporate bonds (91% of total corporate bonds held). In contrast, general insurers and takaful operators largely continued to hold cash and deposits (21% of total assets), and liquid collective investment schemes (CIS) (20% of total assets) to match their shorter-term liability structures. Investments in CIS have grown at a compounded annual growth rate (CAGR) of 12% since 2013.

In the first quarter of the year, the sector increased equity holdings to enhance returns amidst the stronger domestic equity market performance. This was driven by several large life insurers, reflecting short-term asset allocation strategies. Investment in equities continued to be well-diversified across economic sectors and comprised mainly blue-chip stocks. As at end-2017, capital allocated for equity risk increased to 9.1% (2016: 7.8%) of total capital available, contributing to higher overall market risk capital charges of 15.4% (2016: 13.3%) of total capital available (Chart 1.25).

Overall, the investment portfolio delivered better performance for the insurance industry compared to the previous year. Net profits from trading activities rose significantly to RM6 billion (2016: RM0.9 billion), driven largely by higher valuations of equities held by life insurers. Some insurers were also more active in profit-taking on the back of the stronger equity market performance.

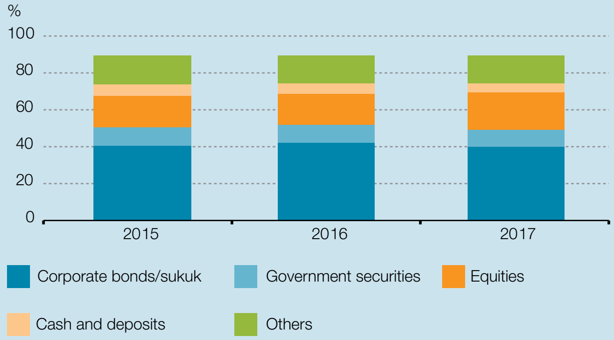
LIQUIDITY AND FUNDING RISK

Overall Liquidity Conditions Improved During the Year with Recovery in Bank Deposits

Aggregate ringgit surplus liquidity in the domestic financial system placed with the Bank remained stable at RM189 billion (2016: RM185 billion). Banking system liquidity comprising placements, reverse repos and statutory reserves with the Bank remained ample at RM176.2 billion (2016: RM167.4 billion) and are available to meet liquidity needs. Banks' funding remained predominantly deposit-based, accounting

Chart 1.23: Life Insurance and Family Takaful Sector – Assets Composition

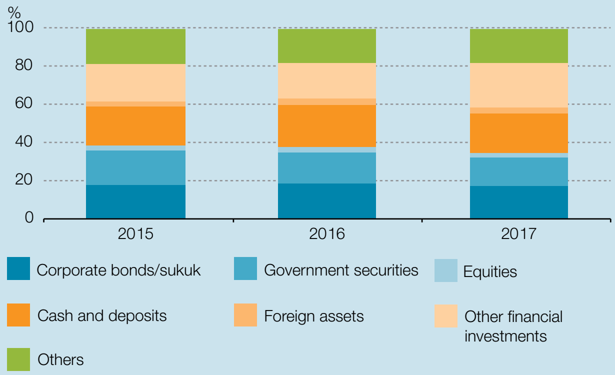
Composition of assets of the life insurance and family takaful sector remained unchanged



Source: Bank Negara Malaysia

Chart 1.24: General Insurance and General Takaful Sector – Assets Composition

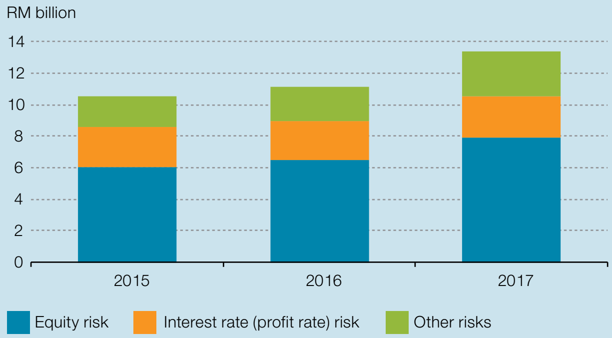
Stable composition of assets of the general insurance and general takaful sector



Source: Bank Negara Malaysia

Chart 1.25: Insurance and Takaful Sector – Market Risk Composition

Higher market risk capital charges reflect increased equity holdings



Source: Bank Negara Malaysia

Risk Developments and Assessment of Financial Stability in 2017

for 69.2% (2016: 69.4%) of total bank equity and all liabilities. The deposits were mainly denominated in ringgit (2017: 93%; 2016: 92.2%). Overall interbank funding and FC-denominated deposits remained low, accounting for 5.6% (2016: 6%) and 4.8% (2016: 5.4%) of total bank funding, respectively. The profile of overall depositors was also generally unchanged. Households remained the largest contributor of bank deposits (37.3%), followed by businesses (33.5%) (Chart 1.26).

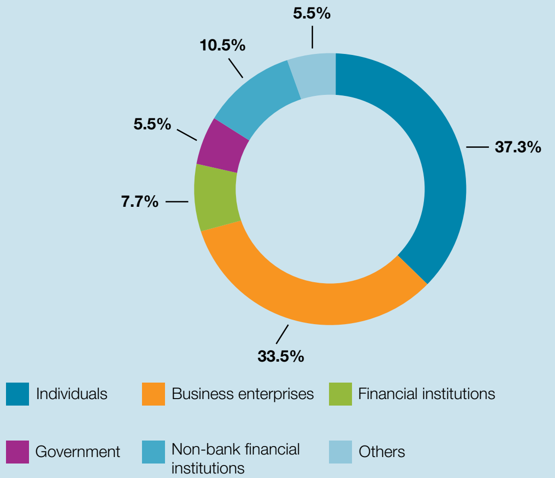
Bank deposits including investment accounts grew by 4% in 2017, a stronger pace compared to 2016 (1.6%). More than half of the growth was attributed to higher deposits from the business sector. This was consistent with the improved profitability of businesses. Deposit outflows by exporters have also declined by RM99.6 billion to RM394.6 billion in 2017 (2016: RM494.2 billion), following the FMC measures in December 2016 which led to more balanced flows in the FX market. Post-measures, net export conversion from trade activities turned positive to USD9.2 billion (January to November 2016: -USD0.5 billion).

Deposits from households (3.9%; 2016: 5.1%) continued to support banking system deposit growth. The moderation in growth during the year was largely due to a reallocation of deposits to higher-yielding alternative investment products such as unit trust funds. While more than 90% of the assets under management by unit trust funds were invested in the domestic financial market, a growing share is invested abroad, particularly in the Asia-Pacific region. In 2016, assets invested abroad amounted to RM31 billion or 8.6% of unit trust funds' total assets (2012: 6.8%). Deposits from non-residents have remained relatively stable even during periods of outflows, accounting for about 4.8% of bank deposits (2016: 4.4%).

Ample liquidity in the banking system continues to support intermediation activities. Banks have continued to diversify their funding base to better match their asset maturity profile by issuing more medium-term instruments. This development is also in anticipation of the implementation of the Net Stable Funding Ratio (NSFR). The expansion of banks' equity and debt instruments by 17.6% outpaced that of assets, which grew by 4.3% during the year. Such instruments accounted for 14.2% of banks' total funding and further reduced maturity and currency mismatches in banks' funding structures. Given the growth of other funding sources, the loan-to-fund (LTF) ratio better captures the more diversified funding structure and broader funding base of banks. The LTF ratio of the banking system stood at 84% (Chart 1.27). Based on the Basel III Liquidity Coverage Ratio (LCR), which is also a more risk-sensitive measure of banks' liquidity profile, all banks are already recording levels above the transitional minimum requirement of 90% in 2018. The large amount of high-quality liquid assets held by banks (21.4% of banking system assets) provides a comfortable buffer for banks in the event of a funding shock.

Chart 1.26: Banking System – Composition of Deposits by Holder

Deposits from households and businesses account for more than two-thirds of total bank deposits

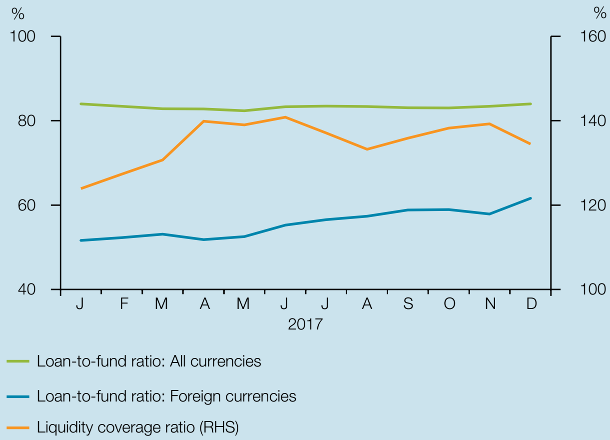


Note: Deposits including investment accounts

Source: Bank Negara Malaysia

Chart 1.27: Banking System – Basel III Liquidity Coverage Ratio and Loan-to-Fund Ratio

Banking system liquidity sufficient to buffer adverse liquidity shocks



Source: Bank Negara Malaysia

The average cost of funds was lower at 2.72% (2016: 2.82%). Average cost of deposits declined to 2.5% (2016: 2.6%) in line with the easing of deposit competition and greater focus on broader measures of funding stability, including the LCR. The interbank rate remained stable at 3.44%. Reflecting the recovery in funding conditions together with better operational efficiency, banks' gross interest/financing margin (GIM) and net interest/financing margin (NIM) improved slightly to 2.11% and 0.71%, respectively (2016: 2.07% and 0.6%, respectively).

Onshore USD liquidity conditions eased during the year after tighter liquidity conditions were observed following the outcome of the US presidential election (Chart 1.28). Spreads on short-term onshore USD liquidity, as reflected by the USD implied yield spread above the London Interbank Offered Rate (Libor), narrowed to 55 basis points (2016: 134 basis points). Spreads on long-term USD liquidity, as reflected by the five-year cross-currency basis swap spread, also declined to 25 basis points (2016: 68 basis points).

The banking system was a net FC borrower in the interbank market (RM14.3 billion or 2.2% of FC liabilities). This continued to be a reflection of interbank placements by parents of locally-incorporated foreign banks (LIFBs) in Malaysia, as part of their group-wide liquidity management strategies. In contrast, large domestic banking groups (DBGs) remained net lenders in the FC interbank market, a reflection of their growing overseas business. The primary sources of FC funding were from customer deposits and long-term FC borrowings, which accounted for 57% of total FC liabilities. This was more than sufficient to fund banks' long-term FC-denominated loans. The FC LTF ratio, although on an increasing trend, remained low at 61.6%.

Chart 1.28: Financial Market – USD Implied Yield Spread Above Libor and 5-year USD/RM Cross-currency Basis Swap Spread (CCBS)

Onshore USD liquidity conditions improved in 2017

Source: Bank Negara Malaysia and Bloomberg

CONTAGION RISK

The Prospect for Non-Bank Financial Institutions to Transmit Risks and Shocks to the Financial System Continues to be Limited

Although non-bank financial institutions (NBFIs)[9] as a group expanded further in size (7.4% in assets; 2016: 5.4%), the risk profile, magnitude and nature of their interlinkages with the domestic financial system remained broadly unchanged (Chart 1.29). The main channel for transmission of risks from NBFIs to the financial system continued to be via investments in common asset classes and equity holdings in Malaysian financial institutions.

On aggregate, NBFIs held a sizeable share of domestic equities and bonds, amounting to 26.4% of total market capitalisation and 37.6% of total outstanding bonds. In the event of financial stress, large-scale disposal of such assets by NBFIs could induce steep valuation adjustments that would affect overall market sentiment and the balance sheets of other financial institutions holding these assets. Another channel of risk is from NBFIs' equity interest in financial institutions, which was substantial at 34.9% (2016: 35.1%) of total market capitalisation of domestic banking groups. At present, these risks are assessed to remain low. Financial buffers – comprising profits, reserves and retained earnings – of large NBFIs improved in tandem with the recovery in global and domestic financial market conditions. On average, such financial buffers increased by 31.4% (2016: -1%) during the year. The return on assets ranged between 5.4% and 8% (2016: 3.8% and 6.1%) across the large NBFIs.

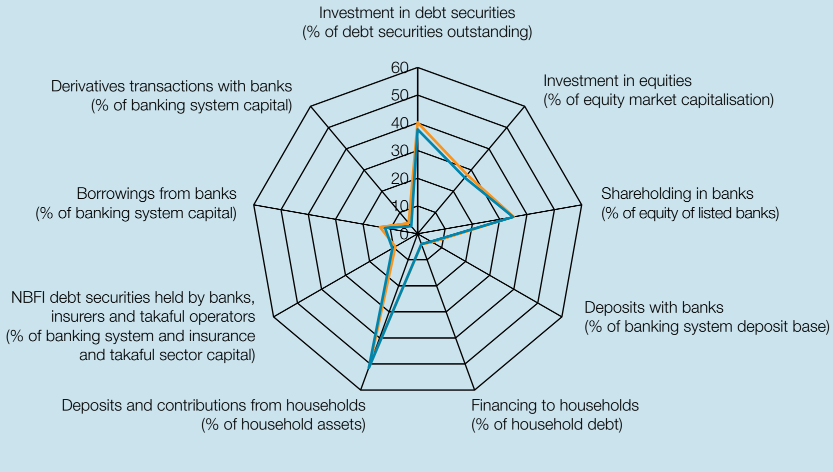
The potential for financial stress arising from maturity transformation activities undertaken by NBFIs also remains limited. The average tenure of corporate bonds issued by NBFIs is 9.7 years, closely matching the average tenure of financing granted (typically below 10 years). The reliance of NBFIs on short-term market funding is low, with commercial papers accounting for less than 4% of total debt securities issued by NBFIs. This limits any potential rollover and funding risks. A few NBFIs, however, remain exposed to higher liquidity risk due to their large deposit base. Such deposits, which can

[9] Refers to NBFIs which are not regulated by the Bank (Chart 1.30).

Risk Developments and Assessment of Financial Stability in 2017

Chart 1.29: Interlinkages of NBFIs with the Financial System

Holdings of bonds and equities are the main channels of interlinkages between NBFIs and the financial system



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Source: Securities Commission Malaysia, Malaysia Co-operative Societies Commission, published financial statements and Bank Negara Malaysia estimates

be withdrawn by customers at any time, are used to fund longer-term assets. To manage withdrawal risks, these institutions have continued to accumulate liquid assets in the form of cash, deposit placements and government securities. On aggregate, NBFIs held liquid assets ranging between 23% and 35% of total assets (2016: between 17% and 32%) to meet potential withdrawals.

Direct credit risk exposures of the financial system to NBFIs remained broadly stable. Banks and insurers' (including takaful operators) holdings of NBFIs' securities were marginally higher at 10.5% (2016: 9.3%) of total capital. Bank lending to NBFIs accounted for 11.9% (2016: 13.8%) of total banking system capital or 2.6% (2016: 3.2%) of banking system loans. Banking system exposures to NBFIs in the form of interest rate and FX swaps remained limited at 3.6% (2016: 5%) of total banking system capital.

Expansion of Banks' External Exposures is in Line with Regionalisation and Centralised Liquidity Management Practices

In 2017, centralised liquidity management (CLM) practices continued to be a key driver of the external exposures of Malaysian banks [including LIFBs and Labuan International Business and Financial Centre (LIBFC) banks] (refer to the Info Box titled 'Centralised Liquidity Management Practices of Malaysian Banks').

Malaysian banks' external assets and external liabilities increased by 5.2% and 3.3%, respectively (2016: -3.4% and 7.1%, respectively) to RM261 billion and RM439.6 billion, respectively. As at end-2017, external assets and liabilities accounted for 10.2% and 17.2% of total banking system assets and funding liabilities, respectively (2016: 10.2% and 17.4%, respectively). Geographically, the bulk of external exposures continued to be with counterparties in Asia (61.1% of external assets and 73.4% of external liabilities), predominantly in Singapore and Hong Kong SAR. External exposures were also largely denominated in US dollar (48.4% of external assets and 46.5% of external liabilities) and ringgit (11.3% of external assets and 39.1% of external liabilities).

On a net basis, external liabilities of the Malaysian banking system widened to RM178.6 billion (2016: RM177.3 billion) (Chart 1.32). The net external liability position primarily reflected the external exposures of LIFBs (RM129.6 billion) and LIBFC banks (RM37.4 billion). The expansion of net external liabilities of LIFBs to RM129.6 billion (2016: RM115.7 billion) was in part due to the strong growth in securities held under custody (43% from RM40.4 billion as at end-2016 to RM57.8 billion). This reflected continued portfolio inflows by non-residents into the domestic financial markets.

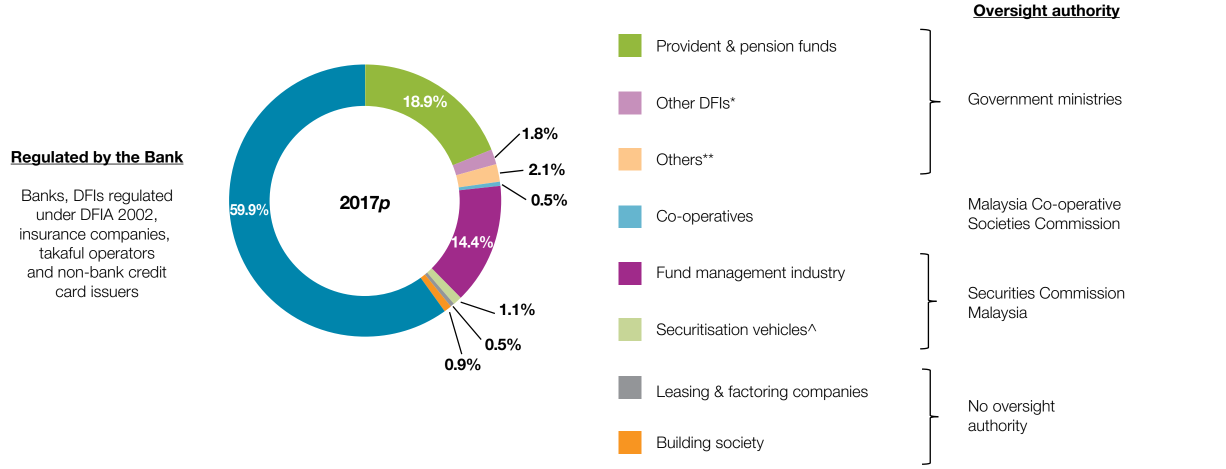
For LIFBs, the bulk of external liabilities continued to be denominated in ringgit (78.1% of total external liabilities) in the form of stable capital funds maintained in Malaysia (30.4%) and securities held under custody

Profile of Non-Bank Financial Institutions in Malaysia

Non-bank financial institutions (NBFIs) accounted for around 40% of total financial system assets as at end of 2017. This level remained relatively stable over the last five years (Chart 1.30). Provident and pension funds, and the fund management industry accounted for the majority (83%) of total NBFIs' assets. The bulk of NBFIs are either regulated by Securities Commission Malaysia and Malaysia Co-operative Societies Commission, or subject to some form of oversight by Government ministries.

Chart 1.30: Size and Composition of NBFIs Relative to Financial System Assets

NBFIs accounted for 40% of total financial system assets; provident and pension funds and fund management industry account for the majority of NBFI assets



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* Refers to other Development Financial Institutions (DFIs) that are not regulated by the Bank under the Development Financial Institutions Act 2002 (DFIA 2002)
** Refers to pawn brokers, money lenders, non-bank provider of education financing, non-bank providers of hire purchase financing, government-owned trustee company, and social security organisation
^ Refers to outstanding asset-backed securities and asset size of national mortgage corporation

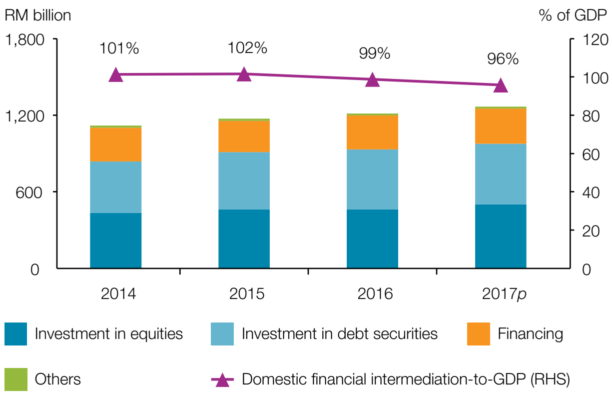
Source: Securities Commission Malaysia, Malaysia Co-operative Societies Commission, published financial statements and Bank Negara Malaysia estimates

Domestic financial intermediation activities of NBFIs continued to be largely driven by financing and investments in plain vanilla debt securities and equities. However, such activities have accounted for a lower share of GDP in recent years (Chart 1.31), partly reflecting investment diversification by NBFIs. A notable development, particularly among the larger pension funds and fund managers, has been the gradual increase in investment in alternative assets such as real estate, infrastructure projects and private equity to improve yields and diversify investment risk. Such investments, however, remained relatively small at less than 15% of total assets of individual NBFIs. The share of overseas assets ranged between 9% and 28% of total assets of individual NBFIs (2014: between 9% and 24%).

Moving forward, the asset profile of NBFIs is expected to reflect further diversification to sustain returns. The pace is expected to be gradual and unlikely to materially change the interlinkages between NBFIs and the financial system.

Chart 1.31: Domestic Financial Intermediation by NBFIs

Decline in domestic financial intermediation activities of NBFIs to GDP reflects investment diversification by NBFIs



Note: Financial intermediation comprises (i) investment in equities; (ii) investment in debt securities; (iii) financing; (iv) securitisation; and (v) credit guarantee or enhancement
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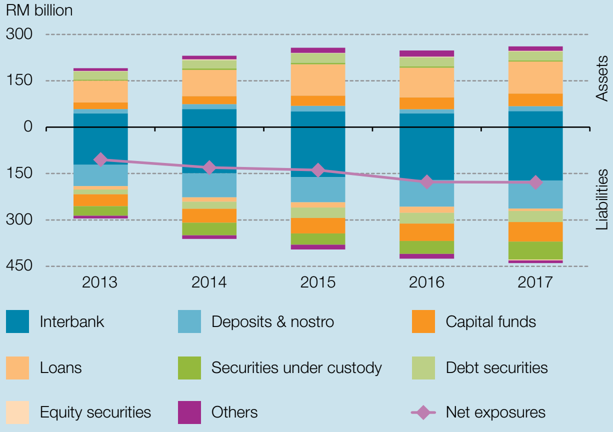
Source: Securities Commission Malaysia, Malaysia Co-operative Societies Commission, published financial statements and Bank Negara Malaysia estimates

Chart 1.32: Banking System – External Assets and Liabilities

Net external liabilities position of the banking system reflects banks' regionalisation and centralised liquidity management



Note: Banking system includes entities operating in LIBFC
External liabilities = External debt (interbank + deposits & nostro + loans + debt securities) + capital funds + securities under custody + others

Source: Bank Negara Malaysia

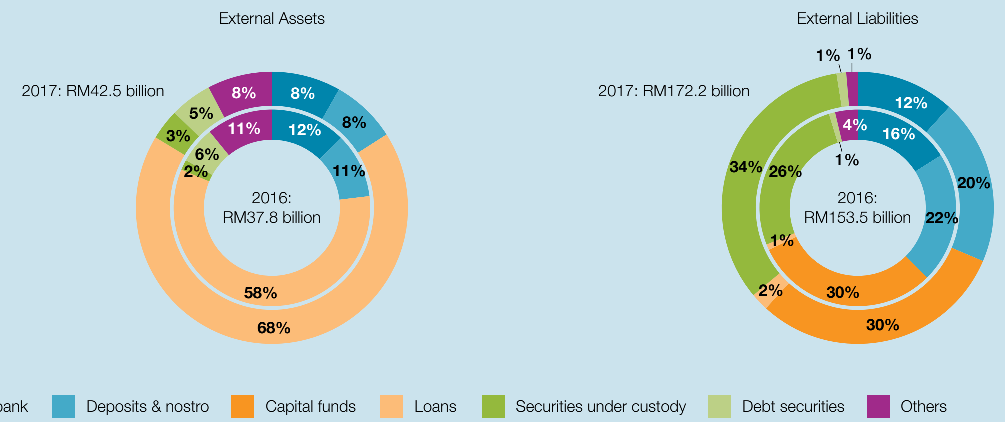
(33.6%) (Chart 1.33). Securities held under custody present limited credit and liquidity risks to the LIFBs, as these risks are borne by the ultimate beneficiaries. Other components of LIFBs' external liabilities include non-resident deposits and interbank funding that were mostly from overseas associates. Such funds have been observed to be stable even during periods of heavy portfolio flows. For DBGs, the bulk of external exposures include related-party interbank transactions (16.8% and 9.6% of external assets and external liabilities, respectively) and FC funding raised in international capital markets as part of CLM operations. Other components of DBGs' external exposures include deposits accepted from non-residents and capital investments in overseas operations (Chart 1.34). LIBFC banks' exposures are primarily in the form of loans (63.4% of external assets) and interbank borrowings (87.2% of external liabilities) and reflective of their FC intermediation activities.

The surge in short-term external debt in the first quarter of 2017 and the subsequent moderation reflected some DBGs capitalising on prevailing market conditions at the start of the year to raise funds. Due to the interest rate differential, these banks were able to raise funds at a lower implied cost via borrowing abroad in FC and swapping the proceeds into ringgit, compared to borrowing from the domestic ringgit interbank money market. However, no undue reliance on external and cross-currency funding was observed. Domestic operations of Malaysian banks remained predominantly funded by ringgit deposits (64.4% of funding). Non-resident deposits and offshore interbank borrowing remained low at 3.4% and 3.5% of funding, respectively. At an institutional level, rollover and FX risks were managed via individual bank's risk management and internal controls practices. These include internal limits on FC loan-to-deposit ratios and FX swap exposures, contingent funding plans and the lengthening of liabilities' maturity structures to reduce asset-liability mismatches.

Based on the Bank's analysis, potential spillover risks from combined external credit and funding shocks to the domestic banking system remained low. Network contagion analysis of banks'

Chart 1.33: Banking System – External Assets and Liabilities of LIFBs

Stable capital funds and securities under custody formed the bulk of LIFBs' external liabilities

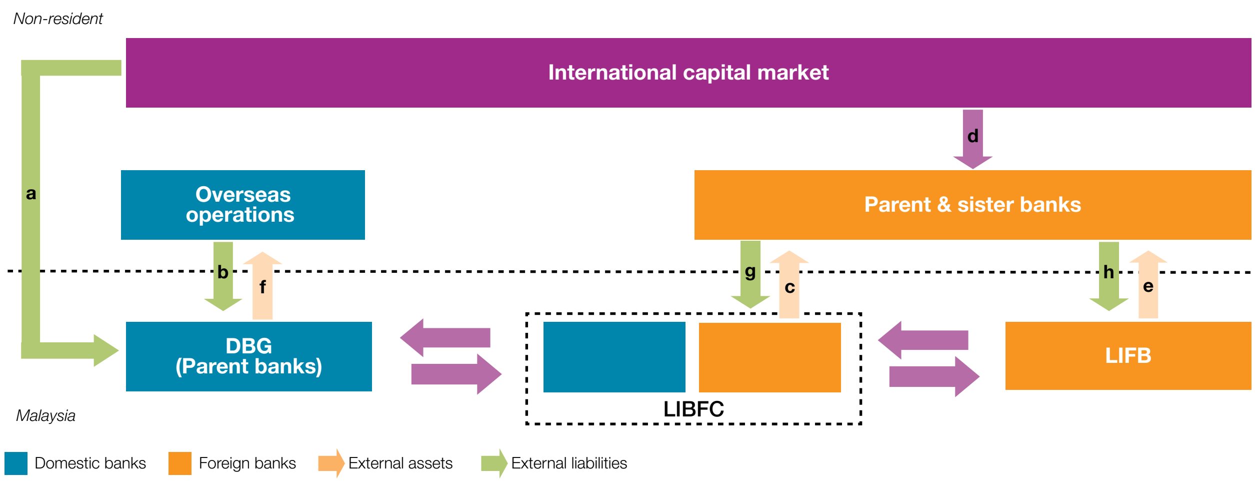


Source: Bank Negara Malaysia

Centralised Liquidity Management Practices of Malaysian Banks

Liquidity gapping positions are managed centrally at the headquarters to optimise relative funding advantages across a group's operations. At the same time, it allows for the effective pooling (a,b,c,d,e) and redistribution (f,g,h) of excess funds across local and overseas entities.

Diagram 1.4: Centralised Liquidity Management Practices of Malaysian Banks



Source: Bank Negara Malaysia

Domestic banking groups (DBGs)

- Liquidity is typically managed centrally at the head office to manage maturity and currency mismatches across the group operations.
- Excess liquidity from related offices along with FC funding raised in international capital markets as part of the broader funding diversification strategy are pooled and redistributed back to related offices. This results in external exposures on both sides of the balance sheet for DBGs, in the form of interbank placements and borrowings.
- Part of the funds are retained at the head office as precautionary buffers against tighter funding conditions and volatility in the FX markets.

Locally-incorporated foreign banks (LIFBs)

- LIFBs are net borrowers of FC liquidity, typically leveraging on parent banks with stronger credit ratings to source cheaper and longer-term FC funding in international capital markets.
- Such FC funding is used to manage funding and maturity mismatches of the FC loan portfolio, for domestic FC interbank lending and for ringgit trading and investment activities.

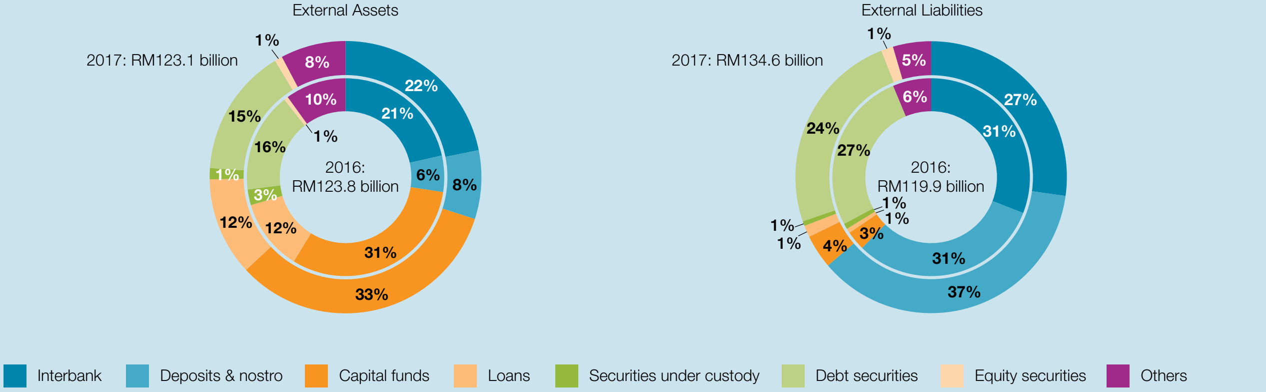
Labuan International Business and Financial Centre (LIBFC) banks

- LIBFC banks are predominantly funded by intra-group borrowings from parent banks or regional offices abroad given their small deposit base.
- Funding and liquidity risks remain limited due to the 'back-to-back' nature of these borrowings (i.e. funding received from the related office typically matches the financing extended in terms of amount, currency and tenure).

cross-border exposures showed that the direct and indirect impact from events of distress in the banking systems of major counterparties on the domestic banking system continued to be limited. The simulated contagion impact arising from a hypothetical banking system distress originating from Singapore (where the Malaysian banking system has the largest exposures), would not cause system-wide distress to the Malaysian banking system even under very conservative assumptions, and without considering the effects of credit risk transfers, loss mitigation responses by banks or policy intervention by authorities.

Chart 1.34: Banking System – External Assets and Liabilities of DBGs

Interbank borrowings and deposits contributed to more than half of DBGs' external liabilities

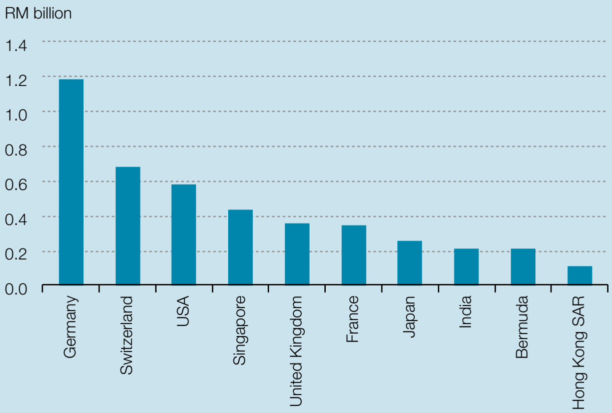


Source: Bank Negara Malaysia

For Malaysian insurers (including takaful operators), external claims are predominantly in the form of general reinsurance exposures. As at end-2017, risks ceded by general insurers to (re)insurers overseas amounted to RM3.1 billion (15.4% of total business underwritten), mostly to US and European (re)insurers headquartered in Germany, Switzerland and the UK (Chart 1.35). Risks ceded out are typically associated with the aviation, offshore oil-related, marine hull and engineering business classes (Chart 1.36). Reinsurance counterparty risks remained stable and low as exposures are mostly to highly-rated global (re)insurers. Risks ceded by the life insurers to (re)insurers overseas remained small at less than 3% of total business underwritten.

Chart 1.35: Insurance and Takaful Sector – Foreign-based Reinsurance Exposures by Major Countries

Counterparty risks remained low as exposures are mostly to highly-rated global reinsurers



Source: Bank Negara Malaysia

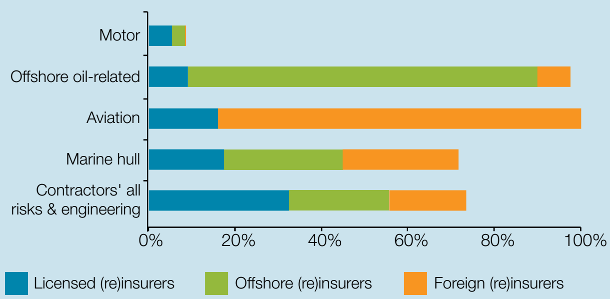
External assets of Malaysian insurers and takaful operators remained small at less than 5% of the industry's total assets and primarily focused on the more liquid equity markets in Asia (Chart 1.37). On aggregate, insurers' ability to further expand their investments abroad is limited given relatively low internal investment limits.

Risks from Domestic Banking Groups' Overseas Operations to the Malaysian Banking System are Contained

Regionally, DBGs continued to expand their operations in line with the growing investment linkages within Asia. Total assets of overseas subsidiaries and branches of DBGs (overseas assets) grew by 4.5% on an annual basis to RM584 billion as at the third quarter of 2017.

Chart 1.36: Insurance and Takaful Sector – Reinsurance Ceded Ratio

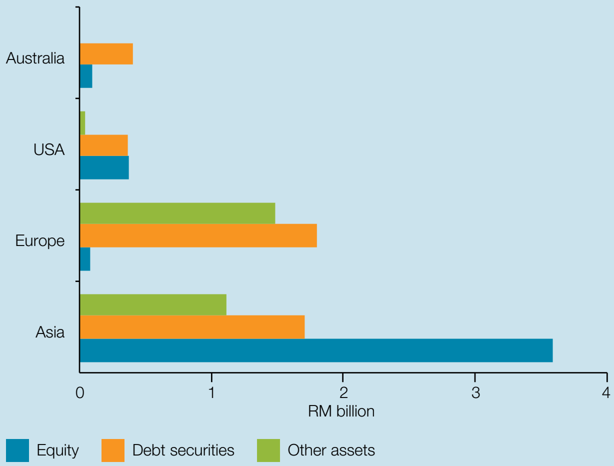
Main risks ceded out are from aviation, offshore oil-related, marine hull and engineering segments



Source: Bank Negara Malaysia

Chart 1.37: Insurance and Takaful Sector – External Investment Exposures by Region

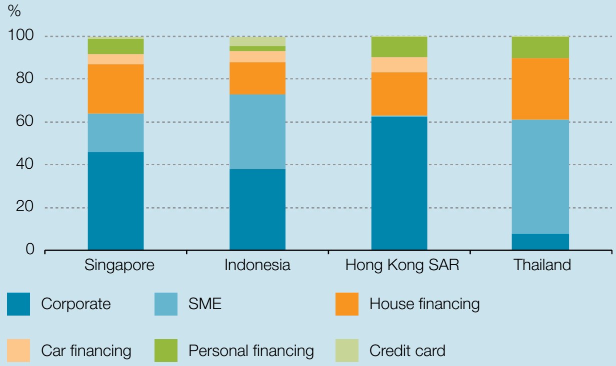
External exposures are mainly to liquid equity markets in Asia



Source: Bank Negara Malaysia

Chart 1.38: Banking System – Loan Composition of Selected Overseas Operations

Composition of overseas loans varies according to jurisdiction



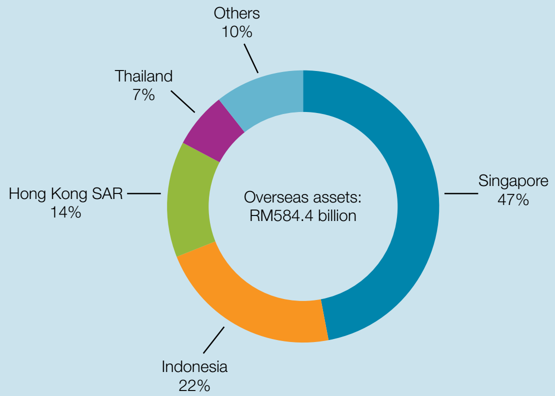
Note: Data as at end 3Q 2017

Source: Bank Negara Malaysia

The share of overseas assets, accounted for 23.2% (3Q 2016: 23.5%) of total assets of DBGs, ranging between 6.7% and 38.3% of total assets of individual DBGs. Loans continued to account for the bulk of DBGs' overseas assets, accounting for 60% of total overseas assets. More than half of these are secured loans for purchases of houses and cars as well as lending to SMEs (Chart 1.38). By geographical reach, the exposures remained largely in Singapore (47%) and Indonesia (22%), where DBGs have significant presence (Chart 1.39).

Chart 1.39: Banking System – Asset Composition of Overseas Operations of DBGs

Two-thirds of overseas assets are from Singapore and Indonesia



Note: Data as at end 3Q 2017

Source: Bank Negara Malaysia

Risks to the Malaysian banking system from overseas operations of DBGs are contained, supported by strong capitalisation and the stable funding structure of the overseas operations. Capital ratios of the large overseas subsidiaries of DBGs remained high, ranging between 10.5% and 19.8% (3Q 2016: between 10.9% and 19.3%). Risks of funding shocks occurring in the overseas operations of DBGs are assessed to be low. Although most DBGs adopt a CLM model for greater efficiency, overseas operations are largely funded by local currency deposits, with minimal reliance on the Malaysian parent for liquidity thus limiting currency and maturity mismatches. Strengthened group-wide risk management policies and oversight arrangements, including more comprehensive stress tests that commensurate with the growing size of the DBGs' overseas operations, further mitigate the potential for risks to be transmitted to domestic banking operations.

Overall asset quality of DBGs has improved, although impairments for some institutions, particularly those operating in Indonesia remained at elevated levels. The median gross impaired loans ratio of the large overseas branches and subsidiaries was relatively stable at 2.3% (3Q 2016: 2.1%) (Chart 1.40). Overseas branches and subsidiaries of DBGs continued to observe sound risk management practices. Such practices include prudent underwriting standards and loan loss provisioning practices, enhanced loan approval processes and intensified monitoring of loans showing signs of distress.

Chart 1.40: Banking System – Range of Key Financial Soundness Indicators of Selected Overseas Operations

Financial performance of overseas operations remained sound

Source: Bank Negara Malaysia

The overseas operations of DBGs also remained generally profitable. The profit contribution from overseas operations to overall group profits stood relatively stable between 1.2% and 18.8% of total group profits (3Q 2016: between 4.8% and 24.6%) of individual DBGs. This sustained capacity of overseas operations to generate income is reflective of ongoing efforts to enhance operational efficiency and diversify income sources to fee-based activities such as treasury business.

Developments in the overseas operations of DBGs continued to be monitored closely as part of the Bank's consolidated supervision framework. This entails the ongoing review of the performance and risk profile of DBGs' overseas operations and periodic on-site examinations to pre-emptively identify risks that may have significant impact on the financial positions of DBGs. Regular engagements with host regulators were held during the year through established supervisory colleges and bilateral meetings. Such engagements facilitate sharing of information, in-depth discussions on supervisory issues and coordination of responses to address these issues. Key supervisory issues commonly discussed during 2017 included credit risk management practices given the asset quality deterioration in selected operations and adequacy of internal controls to manage risks related to money laundering and financing of terrorism.

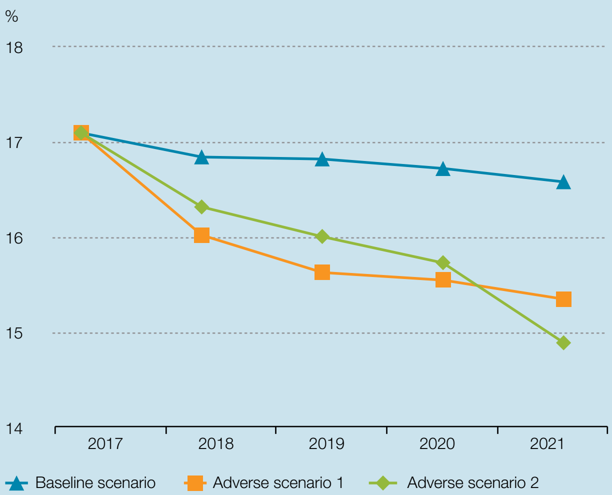
Multi-year Solvency Stress Test Affirmed Financial Institutions' Shock Absorbing Capacity

Stress tests conducted by the Bank affirmed the strong capacity of financial institutions, both at the system and institutional levels, to withstand simulated scenarios of severe macroeconomic and financial strains. At the end of the four-year stress test horizon, the post-shock aggregate TCR of the banking system is estimated to be above 10% under the first adverse scenario (AS1) and second adverse scenario (AS2) (Chart 1.41).

More than 90% of the losses are attributed to credit risk shocks. In AS1, losses from banks' household portfolios account for a larger portion of total losses (38%) compared to AS2 (34%). In both adverse scenarios, credit losses arising from the business portfolio comprise about 60% of total losses, of which the default of top corporate borrowers account for 22% and 33% of such losses in AS1 and AS2, respectively. Cumulative net losses across the stress test horizon amount to 6% and 31% of excess capital under AS1 and AS2, respectively. The aggregate gross impaired loan ratio of the banking system is expected to increase to 5% under AS1 and 9% under AS2 (Chart 1.42). Even under such severe scenarios, banks are well-positioned to absorb the estimated losses with available capital and earnings buffers, without raising additional capital.

Chart 1.41: Banking System – Post-shock Total Capital Ratio

Banking system post-shock aggregate total capital ratio is estimated to be above 10%

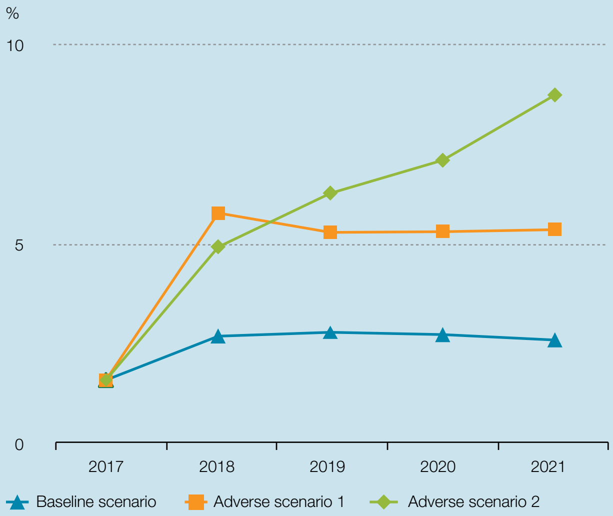


Source: Bank Negara Malaysia

Risk Developments and Assessment of Financial Stability in 2017

Chart 1.42: Banking System – Post-shock Gross Impaired Loans Ratio

Banking system post-shock aggregate gross impaired loans ratio is expected to increase to 9%



Source: Bank Negara Malaysia

The aggregate capital adequacy ratios (CAR) of life and general insurers are estimated to remain above the regulatory minimum across the stress test horizon under both scenarios. With most assets being held in the trading portfolio, life insurers remain most affected by the simulated market risk events of sharp declines in asset prices, particularly under AS1. Under this scenario, the CAR for life insurers is expected to decline from 233% to 202%. The simulated immediate economic recovery in the following years results in a recovery of the CAR to 274% by end-2021.

The aggregate capitalisation of general insurers is estimated to be sustained at above 200% under both adverse scenarios, with the main impact arising from shocks related to higher motor claims. Taking into account the impact of the liberalisation of tariff rates in the motor and fire segments, which is simulated through a reduction in premiums of up to 33% (for 2018 only), aggregate capitalisation of general insurers is expected to still remain above 195%.

An Overview of the Solvency Stress Test Scenarios for Banks and Insurers

The multi-year solvency-based stress test exercise models a series of tail-risk events based on three hypothetical domestic GDP growth paths (one baseline and two adverse scenarios) and the corresponding macroeconomic and financial conditions over a four-year horizon from 2018 to 2021. Simultaneous shocks on revenue, funding, credit and market risks are applied to financial institutions' income and operating expenses, balance sheet and capital levels. The stress test exercise does not consider any loss mitigation responses by financial institutions or policy interventions by authorities. The adverse scenarios are designed to be sufficiently severe for stress test purposes and, based on counterfactual analysis, are unlikely to occur.

The first adverse scenario (AS1) is a V-shaped growth path—with an initial sharp recession in 2018, followed by a strong rebound before normalising to the baseline growth trajectory. The magnitude of the recession is derived based on a 2.5 standard deviation of the long-term GDP growth rate from the baseline. This scenario assumes a synchronised sharp slowdown in the US and PR China, triggered by: (i) a hard landing in PR China due to an over-tightening of credit conditions and severe deterioration in the property market; and (ii) escalating geopolitical tensions leading to worsened business and consumer sentiments and dampening global growth. The global economy is assumed to rebound from 2019 onwards, as policymakers react swiftly with monetary and fiscal stimuli.

The second adverse scenario (AS2) simulates an L-shaped growth path with an initial mild decline, followed by prolonged weakness in GDP growth. This protracted sluggish period is represented by a cumulative decline (over four years) of six standard deviations of the long-term GDP growth rate from the baseline. This is triggered by: (i) prolonged weakness in PR China following a correction of domestic imbalances and ineffective policy responses; (ii) implementation of inward-looking policies by the US and countermeasures by trade partners; and (iii) prolonged political uncertainty in the euro area. Protracted financial market volatility from global developments would also affect wealth and weigh on sentiments, which in turn adversely affect real sector activity.

Table 1.2

Solvency Stress Test: Key Assumptions and Shock Parameters Applied under Assumed Adverse Scenarios

Key Assumptions	Adverse Scenario 1 (AS1)	Adverse Scenario 2 (AS2)
Balance sheet and income projections		
• Annual decline in banks' income growth, differentiated across segments (interest income, fee-based and other income)	• Up to 34%	• Up to 32%
• Decline in loan growth (cumulative annual growth rate)	• -2%	• -3.5%
• Annual decline in insurers' premium income	• Up to 28%	• Up to 20%
Credit risk shocks		
• Probability of default (PD) shocks		
◦ Business loans	◦ 5% to 11%	◦ 5% to 14%
◦ Household loans	◦ 1% to 11%	◦ 1% to 12%
• Loss given default (LGD) shocks		
◦ Business loans	◦ 42% to 57%	◦ 43% to 61%
◦ Household loans	◦ 20% to 77%	◦ 19% to 82%
• Default of top corporate borrowers with large exposures to the banking system	• Corporations that have weak financial standings (below prudent thresholds) under simulated shocks	
Market risk shocks		
• Annual increase in MGS yields	• Up to 51 bps	• Up to 80 bps
• Annual increase in corporate bond yields	• Up to 27 bps	• Up to 43 bps
• Annual decline in FBM KLCI	• Up to 46%	• Up to 27%
• Annual depreciation against major currencies	• 13% to 30%	• 7% to 15%
External funding risk shocks		
• Reversal of claims by non-residents	• Up to 30% of interbank borrowing and deposits	• Up to 15% of interbank borrowing and deposits
General insurance risk shocks		
• Increase in claims ratio	• Up to 30%	• Up to 16%
• Increase in premium liabilities (motor classes)	• Up to 1.5 times additional provision for adverse deviation	• Up to one time additional provision for adverse deviation

Indebted to Debt: An Assessment of Debt Levels and Financial Buffers of Households

By Siti Hanifah Borhan Nordin, Lim Sheng Ling and Muhammad Khairul Muizz Abd Aziz

Malaysia's household debt growth has been moderating for seven consecutive years to 4.9% as at end-2017 [2010: 14.2% (peak)]. This follows a series of measures implemented by the Government and the Bank since 2010, coupled with strengthened lending practices by both banks and major non-bank financial institutions (NBFIs). Risks associated with the accumulation of unsecured borrowings have also receded considerably with growth of personal loans moderating from a peak of 25.2% in 2008 to 2.5% in 2017. As a result, the ratio of household debt-to-GDP declined to 84.3% [2015: 89% (peak)]. More importantly, this deleveraging occurred without adversely affecting private consumption and economic growth. Despite these positive developments, the Bank remains vigilant towards attendant risks from household debt. Research has shown that the negative long-run effects on economic growth tend to intensify as the household debt-to-GDP ratio exceeds a certain threshold[1]. It is therefore worth dissecting household debt on a more granular level – by income group – to gain further insights on potential sources of vulnerability to facilitate better policymaking.

This study builds on last year's box article[2] which introduced the concept of financial margin by various income and debt service ratio[3] (DSR) levels. The assessment is now expanded by taking into account households' liquid financial assets. This contributes to a more complete understanding of debt sustainability which can only be fully appreciated with an analysis of the other side of the household balance sheet – the asset position.

The Bank's earlier study concluded that individual borrowers are more likely to have negative financial margin if they (i) earn less than RM3,000 per month; and/or (ii) have a DSR level of above 60%.

In this article, the aim is to answer the following three questions:

i. Do individual borrowers, at various income levels, have enough financial buffers to meet their debt obligations in the event of a shock?

ii. Which income group is most susceptible to shocks, after accounting for available financial buffers?

iii. Can banks withstand the potential losses under severe shock scenarios?

The assessment will gauge the financial health of individual borrowers under simulated macroeconomic and financial shock scenarios. It is important to note that these shocks are based on conservative assumptions that are more severe than those experienced during past crises. The likelihood of these shocks occurring is therefore low. In assessing households' resilience to these shocks, we focus on the amount of financial buffers available to households in the form of liquid financial assets. This recognises the ease with which these assets can be readily tapped to repay debt obligations and/or cover for unforeseen circumstances (e.g. medical emergencies or job retrenchments). The assessment also seeks to reveal the debt servicing capacity of the borrowers and how they respond to potential shocks, using the financial margin methodology.

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1 Lombardi et. al., 2017 (BIS Working Paper) concluded that economic growth will be affected if the household debt-to-GDP ratio is above 80%. This paper only captures financing extended solely by the banking system as total household debt. Excluding NBFIs, Malaysia's household debt-to-GDP ratio stood at 69.3% of GDP, lower than the threshold identified in this paper.

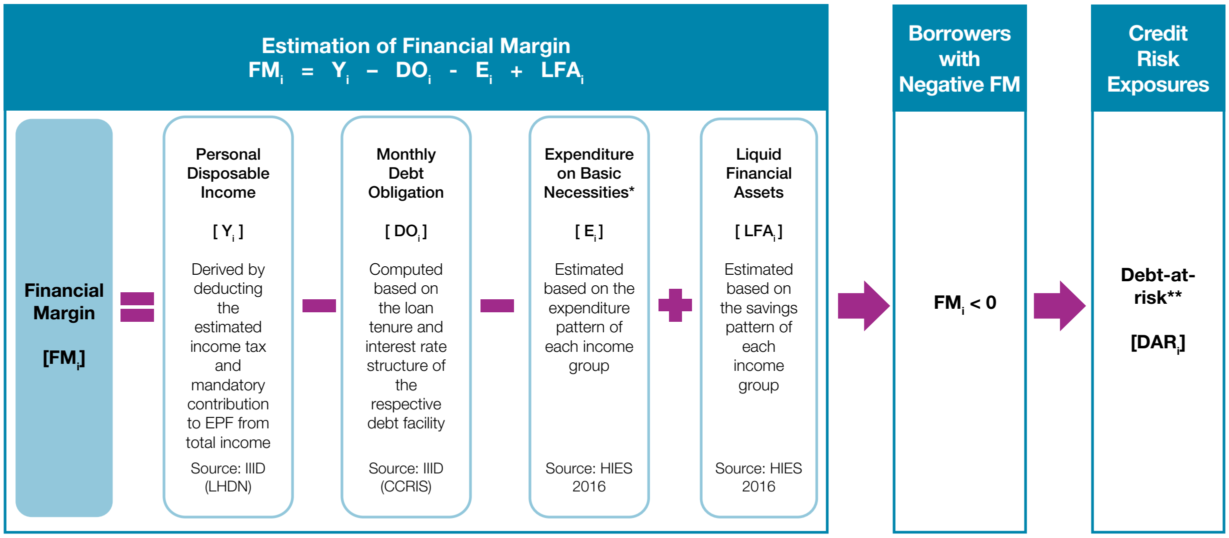
2 'Looking Beyond Headline Household Debt Statistics', Financial Stability and Payment Systems Report 2016, Page 41 - 46.

3 The ratio of total monthly bank and non-bank debt obligations to monthly disposable income (net of statutory deductions).

Financial Margin

The financial margin (FM) methodology is employed to assess whether households are able to withstand unforeseen circumstances such as shocks to income, cost of living and borrowing cost; and the impact of vulnerable borrowers on financial institutions.

Diagram 1: Measuring Credit Risk using the Financial Margin[4] Approach



i individual borrower[5]
* For this study, basic necessities are defined as: (i) food and non-achoholic beverages; (ii) housing rental and maintenance; (iii) water, electricity, gas and other fuels; (iv) transportation; (v) education; and (vi) healthcare
** The proportion of debt of borrowers with negative FM to total household debt after taking into account the collateral value

Source: Bank Negara Malaysia, Inland Revenue Board of Malaysia (LHDN) and Department of Statistics, Malaysia

A borrower's FM is defined as his or her monthly disposable income and liquid financial assets, after deducting debt repayments and expenditure on basic necessities (Diagram 1). In the event of unexpected income and expenditure shocks, individual borrowers with negative FM would be the most vulnerable as they have a higher risk of defaulting on their debt. The debt-at-risk metric, derived from the FM methodology in turn measures the potential losses emanating from borrowers with negative FM, after taking into account collateral values[6].

4 The financial margin is derived from the Integrated Income Indebtedness Database (IIID) which matches borrowings of individuals captured in the Central Credit Reference Information System (CCRIS) with their income information reported to the Inland Revenue Board of Malaysia. It covers close to two million individual records, representing about 6% and 13% of the Malaysian population and labour force, respectively.
5 The assessment is based on 'individual borrowers' instead of 'households' (as defined by the Department of Statistics, Malaysia).
6 This study only considers housing loans as having underlying collateral and imposes a 40% haircut on the collateral value in the event of a default. Other loans are assumed to have a loss given default of 100% (more stringent than the Bank's stress testing framework).

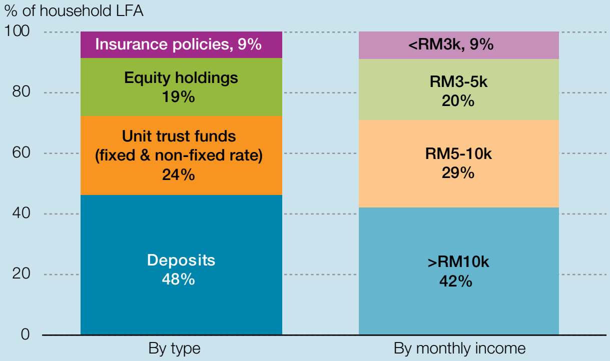
Distribution of Household Debt and Assets[7] across Income Groups

The household balance sheet at the aggregate level is healthy. Household financial assets[8] and liquid financial assets (LFA) are 2.1 and 1.5 times of debt, respectively. However, analysis from a micro-level dataset provides more nuanced insights at different income levels, particularly for lower- and middle-income households.

7 Please refer to the write-up on credit risk from household sector for the complete breakdown of household debt and assets.
8 Include both liquid (i.e. readily available within 3 months) and illiquid financial assets [Employee Provident Fund (EPF) contributions]. Although EPF contributions in Account 2 can be withdrawn for (i) repayment of housing and education loans; and/or (ii) medical purposes, this study assumes all EPF contributions as illiquid financial assets. With the inclusion of housing wealth, total assets cover about 4 times that of total debt.

Chart 1: Composition of Liquid Financial Assets by Type and Income Group

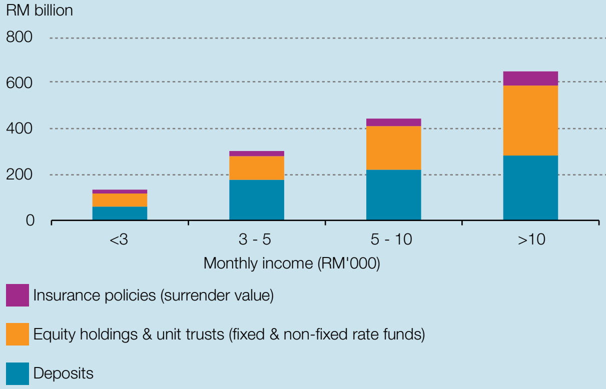
More than two-thirds of LFA consist of deposits and unit trust funds



Note: Estimation of LFA by income group is based on income reported in 2016
Source: Bank Negara Malaysia, Inland Revenue Board of Malaysia, Department of Statistics, Malaysia, Bloomberg, Securities Commission Malaysia and internal estimation

Chart 2: Composition of Liquid Financial Assets by Income Group

Almost three-quarters of LFA are held by >RM5,000 income groups



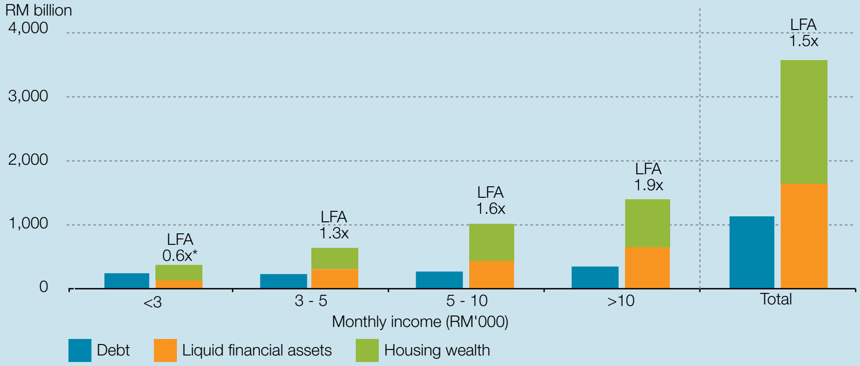
Note: Estimation of LFA by income group is based on income reported in 2016
Source: Bank Negara Malaysia, Inland Revenue Board of Malaysia, Department of Statistics, Malaysia, Bloomberg, Securities Commission Malaysia and internal estimation

The bulk (69%) of Malaysian household financial assets are made up of LFA, of which more than two-thirds are in deposits and unit trust funds (Chart 1). Across income groups (Chart 2), LFA are mostly held by individuals with monthly earnings of more than RM5,000 (71% of total LFA). Individuals earning less than RM3,000 per month held only 9% of total households' LFA.

Based on a conservative assumption that an individual borrower would only have sufficient financial buffers if his or her LFA is more than total debt[9], individuals with monthly earnings of more than RM3,000 are assessed to have adequate financial buffers (Chart 3). Only individuals with monthly earnings of less than RM3,000 have a LFA cover of less than one time (0.6 times) of their outstanding debt. This group of borrowers account for 20% of household debt, with a majority (56%) living in urban areas and one in five having a DSR of more than 60% (Diagram 2). Including housing wealth[10], however, total assets for this group would provide sufficient cover of their debt.

Chart 3: Debt, Liquid Financial Assets and Housing Wealth by Income Group

Individuals with monthly earnings >RM3,000 have sufficient financial buffers

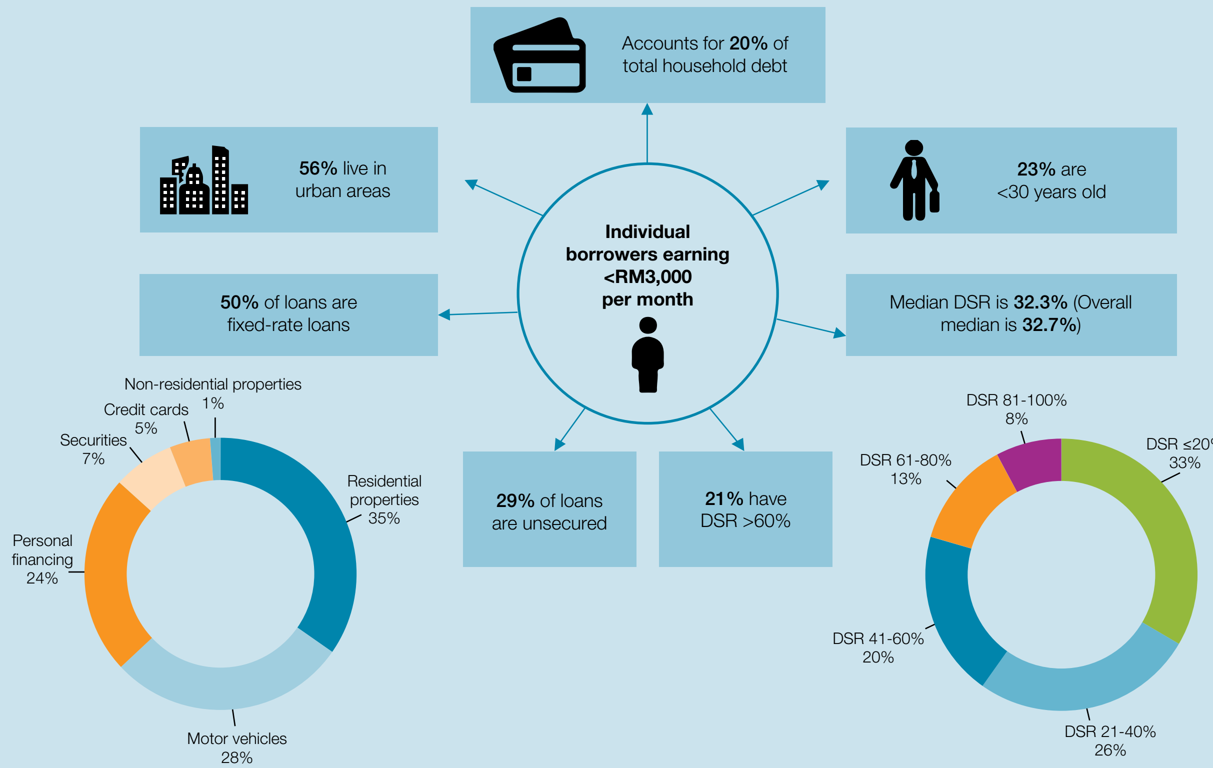


* Liquid financial assets cover 0.6 times of total debt

Note: Estimation of LFA, debt and housing wealth by income group are based on 2016 data whereas total outstanding is based on 2017 position
Source: Bank Negara Malaysia, Inland Revenue Board of Malaysia, Department of Statictics, Malaysia, National Property Information Centre, Securities Commission Malaysia, Bloomberg and internal estimation

9 For this analysis, debt and LFA of individual borrowers are assessed from the perspective of 'stock' levels. This is consistent with the Bank's approach in assessing debt and LFA at the aggregate level.
10 If the need arises, households could sell off their residential property to pay off debt. However, housing assets will take more time to liquidate.

Diagram 2: Profile of Individual Borrowers Earning Less than RM3,000 per month



Source: Bank Negara Malaysia

Household Resilience under the Baseline Scenario[11]

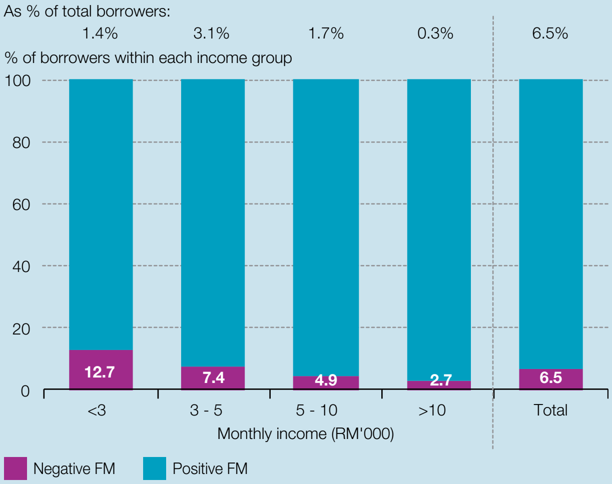
A significant majority of borrowers have positive FM and therefore, are less vulnerable to unexpected income and expenditure shocks. Borrowers with negative FM represent about 6.5%[12,13] (Chart 4) of total borrowers and 12.8% of total household debt (RM139 billion). Most of these individuals have a DSR level of above 60% and earn less than RM5,000 (Chart 5). Following the implementation of the Responsible Financing Guideline[14] in 2012, financial institutions have been observed to adopt a DSR limit of 60% or lower for borrowers in the vulnerable income group (those with monthly earnings less than RM3,000), thus reducing the vulnerability of borrowers to unexpected shocks.

In assessing the potential impact on the financial institutions arising from these borrowers' exposures, a debt-at-risk metric (calculated as the proportion of debt of borrowers with negative FM to total household debt, adjusted for eligible collateral) is used. Under the baseline scenario, the debt-at-risk is estimated at 7.8% of total household debt (Chart 6) or RM84.6 billion, of which RM61.1 billion are held by banks while the rest are held by non-banks. By income group, a large portion of the debt-at-risk is from borrowers with monthly income of RM3,000-5,000, as this income group has the largest number of borrowers with negative FM. Borrowers in this income group have larger exposure to motor vehicle loans[15] (22%) and personal financing (30%) (Chart 7), and are within the younger age bracket (<40 years old). Findings from the Credit Counselling and Debt Management Agency (AKPK) through its Debt Management Programme (DMP) reveal an increasing trend of borrowers in this age group defaulting due to poor financial management and planning.

[11] The baseline scenario reflects households' monthly income, expenditure, debt repayment obligations and liquid financial assets based on data as at 2016.
[12] This is equivalent to about 554,000 borrowers in Malaysia.
[13] The share of borrowers with negative FM and the proportion of their respective debt to total household debt are lower compared to FSPSR 2016 (15.4% and 30%, respectively) following the inclusion of LFA in the FM estimation.
[14] In 2013, this guideline was reissued as 'Policy Document on Responsible Financing'.
[15] This model assumes a loss given default of 100% for motor vehicle loans.

Chart 4: Borrowers with Negative FM by Income Group

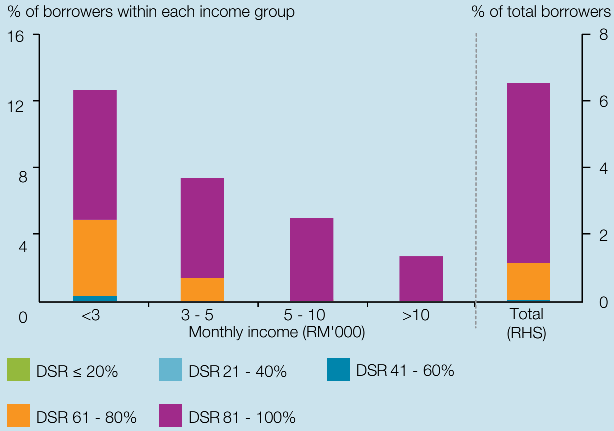
Borrowers with negative FM account for a small share of total borrowers



Source: Bank Negara Malaysia (IIID)

Chart 5: Borrowers with Negative FM by DSR and Income Group

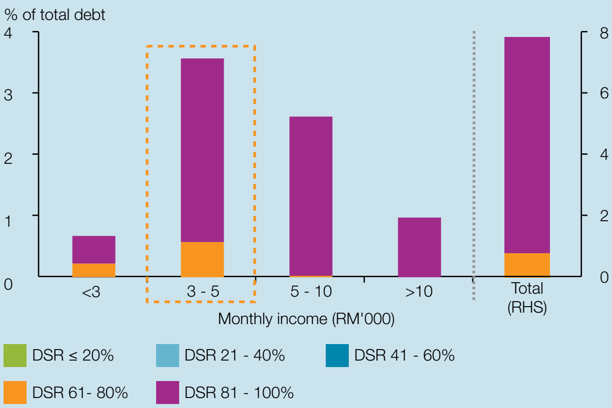
Borrowers with DSR level of above 60% and/or earning <RM5,000 per month are more likely to have negative FM



Source: Bank Negara Malaysia (IIID)

Chart 6: Debt-at-risk for Borrowers with Negative FM by DSR and Income Group

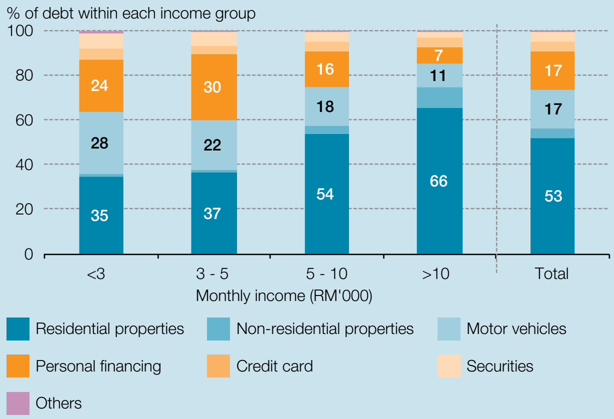
Debt-at-risk for borrowers with negative FM is estimated at 7.8% of total household debt



Source: Bank Negara Malaysia (IIID)

Chart 7: Household Debt by Purpose and Income Group

Borrowers with monthly earnings <RM5,000 have larger share of personal financing and motor vehicle loans compared to other income groups



Source: Bank Negara Malaysia (IIID)

Household Resilience under Stressed Scenarios

In assessing borrowers' debt repayment capacity and financial resilience under stressed scenarios, three different shocks[16] were considered, namely (i) income; (ii) cost of living; and (iii) borrowing cost (Table 1).

The results of the overall stress tests reveal that borrowers are most affected by a decline in total income (Chart 8). A 10% decline in income would increase the share of borrowers with negative FM by 5.2 percentage points (ppt) from the baseline scenario to 11.7% of total borrowers. By income group, borrowers with negative FM increase the most for those with monthly earnings of RM3,000-5,000, to 5.5% of total borrowers (Chart 9) [Baseline scenario: 3.1% (Chart 4)].

[16] These are the main channels that can affect borrowers' debt servicing capacity. While many research papers also considered an unemployment shock, this study indirectly assesses that impact via the decline in total income.

Table 1

Shock Assumptions and Rationale

Shocks	Parameters (Magnitude)	Rationale
Income	Decline in total income (↓ 10%)	Larger than the decline in aggregate household disposable income of 8.7% during the Asian financial crisis in 1998
Cost of living	Increase in basic expenditure (↑ 20%)	Near tripling of the 2009 - 2016 CAGR of 7.3% for expenditure on basic necessities
Borrowing cost	Higher borrowing costs (↑ 50 basis points)	Based on the increase in the average lending rate following two consecutive increases in Overnight Policy Rate in 2006

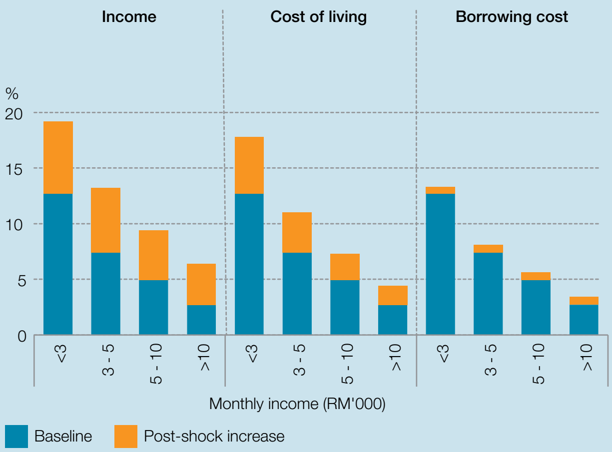
Source: Bank Negara Malaysia, Department of Statistics, Malaysia, Oxford Economics and internal estimation

The impact of a higher cost of living is lower compared to an income shock. When expenditure rises by 20%, share of total borrowers with negative FM increases by 3.1 ppt from the baseline. This largely affects those living in urban areas who are subject to higher living expenses. In addition, borrowers aged between 30 and 40 years old are most affected due to relatively higher debt and expenditure obligations compared to other age groups. Over an individual's lifetime, debt levels typically peak during the middle-age years in line with debt acquired to smooth consumption or invest in real assets, in anticipation of higher future income. As a result, thinner financial margins limit the ability to absorb any sudden increase in the cost of living compared to other age groups. Notably, this age group also accounts for the largest share of participants in the AKPK's DMP (2017: 43.4% of total participants).

In contrast to the other shocks, borrowers are largely unaffected by a simulated 50 basis points hike in the lending rate. The share of borrowers with negative FM only increases by 0.7 ppt compared to the baseline scenario. Of significance, the effect on those earning less than RM3,000 per month is minimal as half of their total debt is in the form of fixed-rate financing.

Chart 8: Pre- and Post-shock Scenarios — Share of Borrowers with Negative FM within Each Income Group

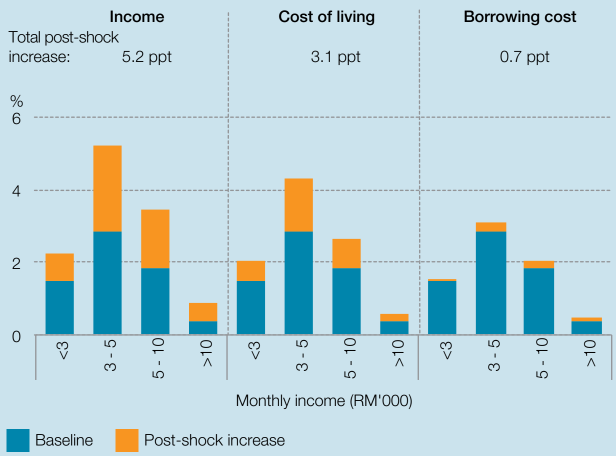
Borrowers are most affected by income shocks



Source: Bank Negara Malaysia (IIID)

Chart 9: Pre- and Post-shock Scenarios — Share of Borrowers with Negative FM to Total Borrowers

Borrowers with monthly earnings of RM3,000-5,000 are most affected by shocks compared to other income groups



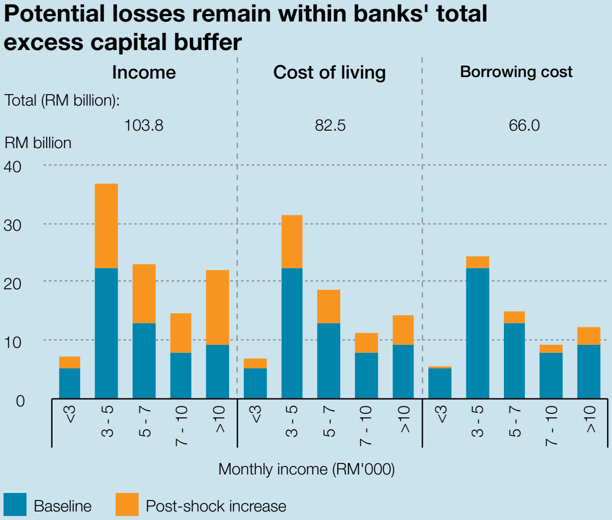
Source: Bank Negara Malaysia (IIID)

Capacity of the Banking System to Withstand Shocks

Banks continue to apply robust risk management practices in managing credit exposures to the household sector. Under the baseline scenario, asset quality remained strong with delinquency and impairment ratios for the overall household sector sustained at low levels of 1.4% and 1% of outstanding banking system loans, respectively, as at end-2017.

Under the stressed scenarios, the potential losses to the banking system from credit exposures to borrowers with negative FM due to income, cost of living and cost of borrowing shocks are estimated to be within the range of RM66 billion to RM103.8 billion (Chart 10). Despite the severity of these shocks, banks are able to withstand the potential losses, which remain within banks' total excess capital buffer of RM124.5 billion[17]. The analysis has not accounted for these shocks occurring simultaneously as the likelihood of this happening is assessed to be low. For example, in a scenario where income levels are declining, possibly due to an economic recession, it is unlikely that interest rates would increase during the period. Monetary policy in such circumstances would likely be accommodative to support economic recovery.

Chart 10: Pre- and Post-shock Scenarios — Potential Losses to Banks



Source: Bank Negara Malaysia (IIID)

Policy Implications

As highlighted above, the risks to financial stability from banks' exposures to vulnerable borrowers are limited due to strong capital buffers. The existing macroprudential measures and strengthened risk management practices of banks further mitigate potential risks. The series of cross-cutting measures introduced since 2010 is depicted in Diagram 3.

The moderation in household debt growth since the introduction of these measures indicate that they have had the desired effects. Findings from this study affirm that the general DSR limit of 60% or below by banks and non-banks has played a key role in reducing risks from high household debt, especially for vulnerable borrowers. These insights also lend support to more targeted policy measures that take into account the different risk profiles of specific borrower groups. This can help minimise the unintended consequences of macroprudential policies such as reduced access to financing for eligible borrowers.

[17] As at 2016.

Diagram 3: Policy Measures Implemented Since 2010

	2010	2011	2012	2013	2014	2015
Macroprudential measures	• Introduction of maximum 70% loan-to-value (LTV) on 3rd residential property loan and above	• Stricter credit card requirements • Introduction of maximum 60% LTV on residential property loan for non-individuals		• Introduction of maximum loan tenure: - Personal financing: 10 years - Residential property loans: 35 years - Car loans: 9 years		
Microprudential measures		• Higher risk weights for capital adequacy requirements	• Implementation of Guidelines on Responsible Financing*	• Implementation of Policy Document on Personal Financing	• Implementation of Policy Document on Risk-Informed Pricing	• Introduction of minimum collective impairment provisions and regulatory reserves of 1.2%
Fiscal and other measures	• Re-introduction** of Real Property Gains Tax (RPGT) for properties sold within the first 5 years (5%)		• Increase in RPGT: - 1st - 2nd year: 10%; - 3rd - 5th year: 5%	• Increase in RPGT: - 1st - 2nd year: 15%; - 3rd - 5th year: 10% • Prohibition of developers' interest bearing scheme and related financing	• Increase in RPGT: - 1st - 3rd year: 30%; - 4th year: 20%; - 5th year: 15% • Establishment of the National Housing Council • Increase in the minimum house price for purchase by non-residents	• Increase supply of low-cost & affordable housing

* Reissued as policy document in 2013

** Between April 2007-2009, RPGT was 0%. Prior to April 2007, RPGT was based on a tiered-rate up to 30%

Source: Bank Negara Malaysia and Ministry of Finance, Malaysia

Although the measures have led to positive effects, continued vigilance along with more proactive and concerted efforts are still needed to improve household resilience, including:

i. A more sustainable strategy towards housing the nation

Loans for the purchase of residential properties remain the largest component of household debt, representing 52% of total household loans. The significant contribution of housing loans towards household debt raises two key issues, namely, housing affordability and the necessity of owning a home. With a growing mismatch between prices of new house launches and households' actual affordability, imbalances in the housing market have worsened[18] in recent years. In certain parts of Malaysia, the median house price is as high as five times the annual median household income, rendering houses in these areas 'seriously unaffordable'[19]. This has led to households needing to borrow more for house purchases with the average size of housing loans approved increasing from RM180,275 to RM420,230 over the past 10 years. The Government is therefore pursuing a multi-pronged approach to deal with concerns on housing affordability, with an increase in the supply of affordable homes as a key priority. This would support efforts to achieve more sustainable household indebtedness levels.

At the same time, more could be done to ensure renting becomes a viable alternative for households. A conducive rental market would provide borrowers the option to rent rather than incur more substantial debt and expenditure burdens associated with owning a home. Recognising this, the Government in the Budget 2018 announced the formulation of a Residential Rental Act to promote a more vibrant rental market together with the establishment of a Tenancy Tribunal to safeguard the rights of both tenants and landlords. The Government has also introduced a tax exemption (50%) on income derived from the rental of residential property up to RM2,000 from 2018 until 2020, to spur the rental market.

[18] 3Q 2017 BNM Quarterly Bulletin, Box Article 2: 'Imbalances in the Property Market'.
[19] Affordability thresholds are based on the Median Multiple approach by Demographia International (2017).

ii. Encouraging insurance and takaful coverage as a safety net

AKPK's experience finds that 18% of borrowers joined the DMP due to (i) loss of employment or death of the family breadwinner; or (ii) unexpected medical expenses (refer to box article on 'AKPK – Advancing Prudent Financial Behaviours' in Chapter 5). Not only are lower income groups vulnerable to such events but high-income borrowers with negative financial margin can also be severely impacted, as observed in this study.

On-going efforts by the Bank and the industry to make insurance and takaful policies more accessible could therefore strengthen households' resilience to shocks by providing financial relief in times of need. These efforts have an important impact given that 65% of the Malaysian population still do not own a life insurance or family takaful policy. The recently introduced Employment Insurance Scheme[20] - which acts as a safety net for retrenched employees – will also help contain the impact of a negative shock on household balance sheets.

iii. Promoting responsible lending behaviour, including among non-bank lenders

Household borrowings from NBFIs (representing about 20% of total household debt) were the main driver behind the rapid expansion in household debt observed between 2010 and 2013, mainly in the unsecured financing segment. These NBFIs typically lend to targeted borrowers from the lower income segment or with poor credit histories who may be unable to obtain financing from banks.

The rise in credit activities by NBFIs which include money lenders and credit co-operatives requires a review of existing oversight arrangements for these entities. The impending enactment of the Consumer Credit Act (CCA) will pave the way towards strengthening such arrangements with a focus on (i) promoting prudent and responsible lending practices among credit providers; (ii) safeguarding the wellbeing of consumers; and (iii) supporting more coordinated and consistent oversight arrangements for credit providers (refer to Chapter 5 for further details).

iv. Enhancing financial literacy among Malaysians

In promoting prudent and responsible borrowing behaviour, the importance of financial education should not be understated. Studies have shown that financial illiteracy is a key contributor to excessive indebtedness and is associated with increased incidence of default[21]. In Malaysia, while over 90% of consumers are 'banked', most of them lack the understanding of the concept of diversification, time value of money and compound interest[22]. This underscores the importance of on-going collaborative efforts between the Bank and other agencies in driving forward the financial education agenda, which includes a National Strategy for Financial Literacy. AKPK has also continued to play its role in nurturing financial responsibility and credit management skills through its various financial education modules and the POWER! Programme.

Conclusion

This study supports the conclusion that risks to financial stability posed by household indebtedness remain manageable. Notwithstanding an increase in lower income borrowers with negative financial margins, banks continue to have sufficient capital buffers to withstand potential losses arising from the household sector under severe macroeconomic shocks.

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[20] Administered by the Social Security Organisation (SOCSO), this scheme provides temporary financial assistance and training to retrenched workers in the private sector for up to six months. The contribution started in January 2018 while the payouts to eligible employees will begin in January 2019.

[21] For example, Gerardi, Goette and Meier (2010): 'Financial Literacy and Subprime Mortgage Delinquency: Evidence from a Survey Matched to Administrative Data', Federal Reserve of Atlanta Working Paper Series.

[22] Financial Stability and Payment Systems Report 2015, Page 102-103 and Financial Inclusion and Capability Survey, 2015, Bank Negara Malaysia.

Macroprudential measures implemented thus far have had an important role in preventing an unrestrained build-up of credit risks which could potentially pose systemic implications to the financial system. Improved underwriting practices amid strengthened loan affordability assessments by financial institutions have further contributed to a more sustainable pace of growth in household debt. These measures remain relevant amid sustained positive effects. While household debt levels remain high, tightening of measures is not warranted given the current continued moderation in household debt expansion, declining household debt-to-GDP ratio and prudent debt service ratio level amid steady economic growth. This is also important to avoid over-adjustments that may have adverse spill over effects to economic and financial stability. Measures to promote household resilience will also need to address more structural issues, including income, housing and public transportation, to improve affordability and to limit the accumulation of excessive debt by households.

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Banking Sector

Banking Sector

PERFORMANCE OF THE BANKING SECTOR

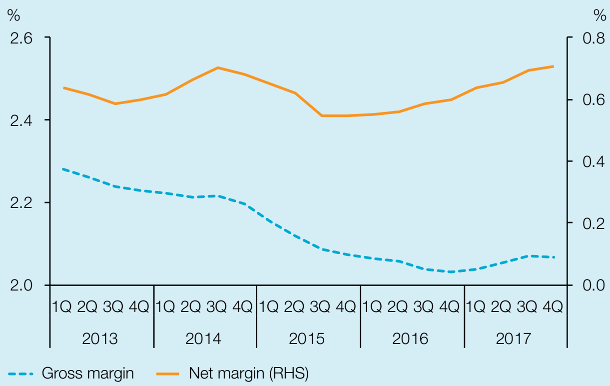
The banking sector maintained a sound financial position during the year, underpinned by robust governance and risk management. Higher profits amidst sound asset quality contributed to further strengthening of the capital position. The stable funding conditions in 2017 enabled banks to remain supportive of the financial needs of businesses and households.

Strong capitalisation and stable funding conditions continued to support financing needs of the economy

The banking sector, including Islamic banks, posted pre-tax profits totalling RM36.2 billion in 2017 (2016: RM32.2 billion). Net interest/finance income increased by 7.8% (2016: 1.9%), reflecting mainly the slower growth of 1.2% in interest/finance expense (2016: 4.7%) as competition for deposits eased. A higher share of demand deposits (2017: 22.1%; 2016: 21.6% of total deposits) also contributed to lower funding costs of banks. Correspondingly, gross interest/finance margin widened marginally by four basis points to 2.11% of interest/finance-related assets (2016: 2.07%) (Chart 2.1). Overall earnings were further boosted by the higher fee-based income from financing-related activities (e.g. credit commitments) and active stock broking activities amidst a vibrant domestic equity market. Fee-based income recorded a double digit growth of 12.5% in 2017 after two years of negative growth (2016: -3.1%; 2015: -4.2%). Following the strong recovery, the share of fee-based income as a percentage of gross income increased to 15.2% (2016: 14.6%).

Chart 2.1: Banking System – Gross and Net Interest Margins

Gross and net interest margins improved slightly



Source: Bank Negara Malaysia

Increased automation and improved process efficiencies continue to support higher productivity in the banking sector. Pre-tax profits per employee rose by 12.5% for the year to RM305,165 per employee. This was despite higher staff cost (2017: 7.1%; 2016: -6%) as banks sought to retain and hire high-skilled talent in a competitive labour market. Banks also spent a higher amount to upskill the workforce in response to changes in the operating environment and greater use of technology. This was reflected in the higher growth in training cost of 16.7% in 2017 (2016: 3.8%). Overall, the average returns on equity and assets rose to 13% and 1.5% respectively (2016: 12.5% and 1.3%).

Banks continue to maintain a strong level of capitalisation. Healthy earnings, coupled with generally conservative earnings retention policies, have enabled the banking sector to build strong buffers. As at end-2017, all banks reported capital ratios that were well above the minimum requirements specified (Table 2.1, Chart 2.2), including the 2.5% capital conservation buffer (CCB) that will only be fully phased-in beginning 2019. In addition, more than 80% of the sector's total capital is of high quality, in the form of equity, retained earnings and reserves. Tier 1 capital expanded by RM5.4 billion (2.5%), driven primarily

Table 2.1

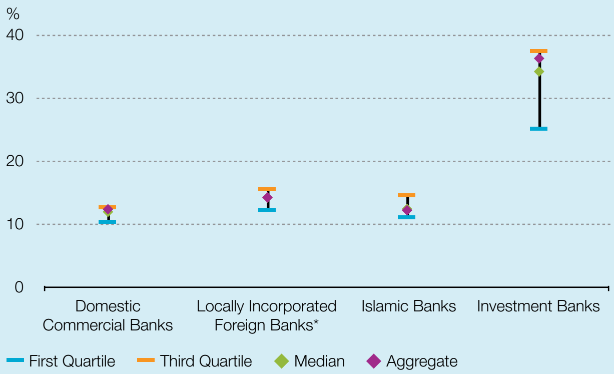
Banking System: Year-end Capital Ratios

(% of risk-weighted assets)	Minimum	2015	2016	2017
CET1 Capital Ratio	4.5	13.3	13.1	13.3
Tier 1 Capital Ratio	6.0	14.2	14.0	14.3
Total Capital Ratio	8.0	16.6	16.5	17.1
Leverage Ratio (Observation period)	3.0	7.5	7.7	7.8

Source: Bank Negara Malaysia

Chart 2.2: Banking System – CET1 Capital Ratios

Banks maintain high quality capital



* With large operations in Malaysia

Note: Data as at end-2017
Source: Bank Negara Malaysia

by dividend reinvestments and capital injections. Capital buffers (including CCB) for the banking sector as a whole correspondingly strengthened further by 8.3% to RM134.8 billion (2016: 0.2%, RM124.5 billion).

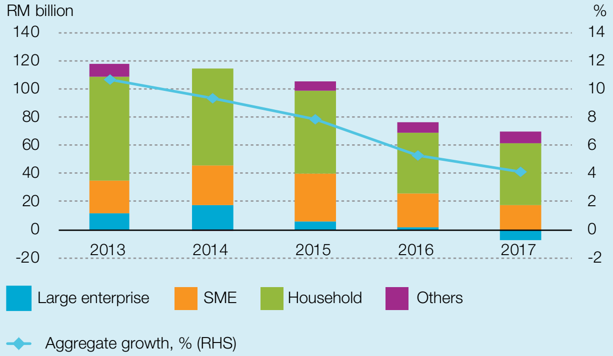
The balance sheet of the banking sector expanded by 4.3% for the year. In the first half of 2017, banks' holdings of Malaysian Government Securities surged by 29.4%, lending support to the local bond market during periods of outflows by non-residents (refer to 'Market Risk' in the Chapter on 'Risk Developments and Assessment of Financial Stability in 2017'). By year-end, banks' holdings of such papers declined slightly to RM168.6 billion (2016: RM147.8 billion). Reflecting the shift towards lower risk assets, banks' risk-weighted assets increased at a slower rate of 0.7% in 2017 (2016: 1.7%). The risk-weighted asset density ratio (risk-weighted assets as a share of total assets) correspondingly declined to 60.9% (2016: 63.1%). The leverage ratio (as reported by banks under the observation period) was nonetheless unchanged at more than two times the prescribed minimum level of 3% which takes effect on 1 January 2018.

Total outstanding financing by banks grew at a moderate pace of 4.1% for the year (2016: 5.3%) (Chart 2.3). This reflected the slower growth of 1.8% in outstanding business sector financing which offset the steady expansion in financing extended to households at 5.1%. For large businesses, repayments outpaced disbursements as stronger business earnings encouraged large businesses to pare down borrowings for working capital. The moderation in growth of outstanding financing to businesses was observed in most sectors.

Financing extended by banks to small and medium enterprises (SMEs) expanded by 6% in 2017 (2016: 9.5%). Slower growth in financing to SMEs in the construction and real estate sectors, reflecting softer conditions in the property market, contributed to slower overall financing growth for the year. Banks remain supportive of the financing needs of SMEs. During the year, about 104,000 SME applications were approved by banks, resulting in a sustained approval rate of around 77% (2016: 77.3%). The share of SME financing increased to about 53% of total business financing by banks as at end-2017 (2016: 51%). In June 2017, the Bank consolidated four special financing schemes for SMEs (namely the Fund for Small and Medium Industries 2, New Entrepreneurs Fund 2, Fund for Food, and Micro Enterprise Fund) into an omnibus fund called BNM's Fund for SMEs, with total allocation of RM10.1 billion. This was intended to better optimise utilisation of the funds available in response to changing demand from SMEs. Since inception, around RM30 billion financing has been granted to more than 75,000 SMEs for working capital and business expansion. The Bank has also enhanced the features of BNM's Fund for SMEs to

Chart 2.3: Banking System – Growth in Outstanding Financing

Bank financing grew at a moderate pace



Source: Bank Negara Malaysia

Disaster Relief Facility for SMEs

- On 7 November 2017, the Bank activated the Disaster Relief Facility totalling RM500 million to alleviate the financial burden and assist in the resumption of business activities of SMEs affected by floods in Malaysia. Eligible businesses could obtain financing of up to RM500,000 at 2.25% per annum, from 8 November 2017 to 31 May 2018.
- As at end-February 2018, more than 180 applications from SMEs amounting to approximately RM58 million have been approved. Financial institutions have also proactively assisted 353 affected SMEs with debt obligations totaling RM154 million, through repayment moratorium and restructuring and rescheduling of credit facilities.

further assist SMEs with no track record or collateral. Furthermore, access points to the fund were expanded through more participating financing institutions.

Banking sector financing to the household sector sustained an annual growth rate of 5.1% in 2017 (2016: 5.3%). Financing was driven mainly by the purchase of residential properties which grew by 9% (2016: 9.4%), while growth of financing extended for consumption credit (purchase of transport vehicles, personal financing, credit card and purchase of consumer durables) was flat. Eligible borrowers continued to have access to home financing as reflected in the approval rates which have remained above 70% for the past few years.

The asset quality of banking sector loans remained intact throughout the year. Continued improvements in banks' risk management practices have kept delinquencies and impairment at low levels. In 2017, delinquencies, as measured by loans-in-arrears of between one and three months, declined slightly to 2.1% (2016: 2.2%) of total bank loans. The amount of impaired loans (net of individual impairment provisions) similarly decreased by RM104.3 million to account for 1.1% of total loans net of individual impairment provisions as at end-2017 (2016: 1.2%). Banks' provisioning levels remained adequate with a loan loss coverage ratio (including regulatory reserve) of 114.8% (2016: 112.1%).

Measures taken to strengthen financing affordability have helped to maintain the low level of impairment and delinquency ratios for the household sector, which stood at 1% and 1.4% of total household loans respectively (2016: 1.1% and 1.4%, respectively). For the business sector, a deterioration in credit quality was observed during the year in the oil and gas-related exposures. Overall, impairment for the business sector portfolio remained low at 2.5% of total business loans (2016: 2.5%). The improvements in banks' risk management practices, with more favourable economic and labour market conditions, continued to support overall loan performance with banks' net interest/finance margin (gross interest/finance margin net of impairment provisions and operating costs) improving to 71 basis points (2016: 60 basis points) (Chart 2.1).

DEVELOPMENT OF THE BANKING SECTOR

Initiatives implemented under the Financial Sector Masterplan (2001 – 2010) and the Financial Sector Blueprint (2011 – 2020) have placed the banking sector on a stronger footing to support the needs of the economy. The banking sector is more resilient today, supported by strong institutions. Greater competition has also contributed to improved banking system efficiency.

As Malaysia transitions into a high value-added, high-income economy, the banking sector will continue to assume an enhanced role in supporting this transformation. In line with this, the ongoing and future initiatives will focus on: (i) extending the outreach of financial services in order to create more meaningful access to a wider segment of the population; (ii) developing innovative financing solutions for SMEs; and (iii) leveraging on technology to drive innovation and further efficiency.

Enhancing financial inclusion

Building on the momentum of financial inclusion initiatives over the years, further progress has been achieved in promoting inclusive access to affordable banking services for all segments of the Malaysian population during the year (Diagram 2.1).

The Bank further intensified efforts to increase bank account ownership and utilisation of formal banking services by the public. This focused on: (i) expanding agent banking reach and services

Diagram 2.1

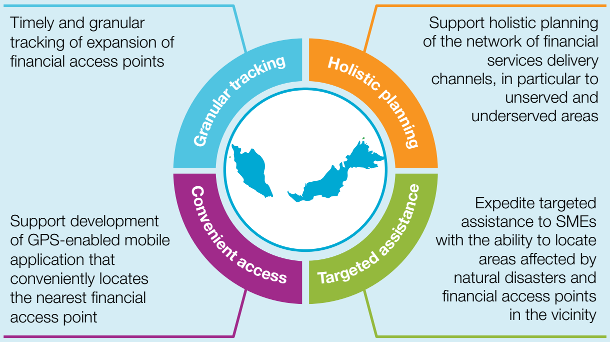
Selected Financial Inclusion Indicators

10,454	financial access points, serving 99% of the Malaysian population
96.2%	sub-districts with a population of 2,000 or more have access to basic banking services
7,193	financial access points provided by authorised banking agents
31,044	savings accounts opened via authorised banking agents
136.7 million	financial transactions at authorised banking agents, amounting to RM11.4 billion

Note: Data as at end-2017
Source: Bank Negara Malaysia

Diagram 2.3

Benefits from the Application of Geo-spatial Analytics



Source: Bank Negara Malaysia

in unserved areas; (ii) introducing cashless clusters to encourage e-payments as a way to bring the unbanked community into the formal financial system; and (iii) promoting micro-financial products (Diagram 2.2).

Focus on increasing bank account ownership and utilisation of formal banking services to further enhance financial inclusion

During the year, the Bank also explored the use of geo-spatial technology and satellite imaging to enhance the identification and monitoring of financial access points in Malaysia. In December 2017, the Bank signed a Memorandum of Understanding (MoU) with Remote Sensing Agency Malaysia, an agency under the Ministry of Science, Technology and Innovation to formalise cooperation in this area. Using remote sensing and Geographical Information System technology, a centralised database and online portal will be established to enable the automated mapping of and access to information on all financial access points in the country via satellite imaging. Moving forward, the ability of geo-spatial analytics to overlay information such as administrative boundaries, demographics, infrastructure and topography is expected to further enable financial institutions to improve delivery of financial services. In addition, a GPS-enabled mobile application will allow the public to locate the nearest financial access points conveniently (Diagram 2.3).

Diagram 2.2

Increasing Bank Account Ownership and Banking Services Utilisation

1 Expand agent banking reach and services

- Appoint agents in 34 unserved sub-districts
- Expand agent banking services (e.g. microinsurance, remittances, financing repayment and account opening by foreign workers)

2 Introduce cashless clusters

- Secondary Schools: MyDebit@School debit card programme
- Universities: Kad Diskaun Siswa 1Malaysia (KADS1M) debit card for purchase of education materials
- Hypermarkets: All merchants within NSK and Giant hypermarkets equipped with e-payments infrastructure

3 Promote micro-financial products

- Encourage offering of long-term contractual microsavings products by financial institutions for the low-income segment
- 1,655 microsavings accounts opened, of which 10% are by first-time participants in the formal financial system
- Introduce Microfinance Village programme to provide financial solutions for micro businesses

Source: Bank Negara Malaysia

Digitalising financial services

The banking sector continued to harness the use of electronic platforms in 2017 to increase efficiency and value-add of financial services offered to consumers. During the year, digital platforms and e-touch points were leveraged to enhance efficiency and convenience in the provision of financial offerings to SMEs. In collaboration with the Bank and financial industry, the Credit Guarantee Corporation Malaysia Berhad developed imSME, Malaysia's first SME financing referral platform. The platform provides SMEs with a one-stop online access point to financing and structured assistance. Launched in February 2018, the platform matches SMEs' financing needs with suitable financing products from various institutions and funds in a seamless and efficient manner. Applications that are unmatched or rejected will be referred to the imSME Financial Advisory Team, which provides structured assistance to SMEs to improve their future financing eligibility and connect them to alternative financing providers (Diagram 2.4). This should significantly ease the process of obtaining financing for SMEs. To date, 15 institutions (banks and development financial institutions) have participated in the imSME platform to offer financial products and services.

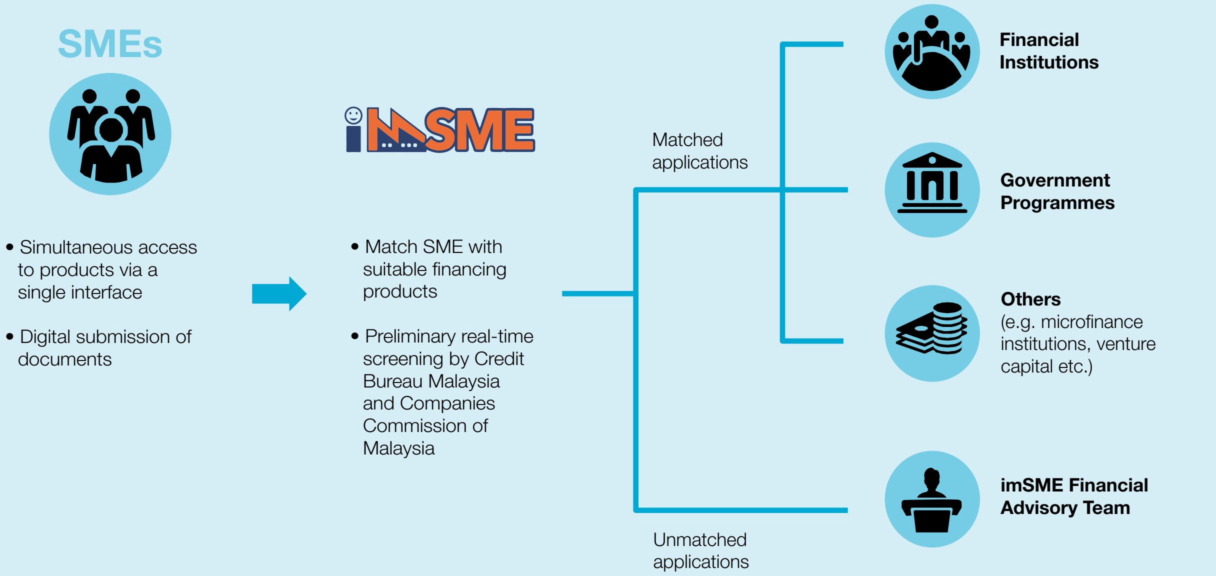
Another key initiative to enhance public access to financial information was the launch of eCCRIS on 19 January 2018. eCCRIS is an online platform for individuals and businesses to access their own credit history. Prior to its launch, borrowers could only obtain personal Central Credit Reference Information System (CCRIS) reports from the branches of the Bank and Agensi Kaunseling dan Pengurusan Kredit. With this initiative, borrowers can now avail themselves to quick and easy access to credit information via the eCCRIS website at their own convenience. This further complements efforts to inculcate a sound credit culture by empowering borrowers to actively monitor and take charge of their own credit standing. eCCRIS also supports direct requests by borrowers to update information in CCRIS in a secure environment. More than 42,000 individuals and businesses have registered for an eCCRIS account as at 7 March 2018.

Professionalising the banking sector

The industry continues to demonstrate a strong commitment towards strengthening the professional standards of its workforce. By end-2017, a total of 199 key senior management officers and directors have enrolled in the Chartered Banker programme introduced by the Asian Institute of Chartered Bankers (AICB). The internationally recognised programme combines theory and practice to equip practitioners with the highest standards of professionalism. As at end-2017, over 5,100 new employees in the financial sector have completed the compulsory ethics module.

Diagram 2.4

imSME, the Online SME Financing Platform



Source: Bank Negara Malaysia

Efforts were also directed during the year towards elevating technical competencies in the banking sector. Beginning January 2018, key personnel in critical job functions are required to obtain specialised qualifications from programmes offered by AICB. These are in the areas of credit, compliance, risk management, audit and Anti-Money Laundering/Counter Financing of Terrorism. This will further strengthen the reputation of the banking profession, underpinned by the consistent demonstration of high levels of professionalism and competence in banking conduct and operations (refer to the box article on 'Financial Sector: Employment Conditions and Preparing the Workforce for the Future').

Enhancing the role of development financial institutions (DFIs)

Since their establishment, DFIs have continued to promote key sectors of strategic importance to the economy and act as key levers in advancing the socio-economic objectives of the country. Funds have been channelled towards priority sectors, particularly agriculture, SMEs, maritime, infrastructure, export-oriented, and capital-intensive and high-technology industries. DFIs also provide advisory services and technical assistance to nurture the sustainable development of identified strategic sectors.

Between 2008 and 2017, total outstanding financing by DFIs recorded an average annual growth rate of 9%. The financing needs of the priority sectors have been met through various financing schemes and programmes. For instance, DFI-based financing schemes have been introduced since 2015 to promote affordable home ownership. During the year, the schemes were expanded to cater not only for the youth and agriculture communities, but also for the bottom 40% household income group (B40). As at end-2017, total financing of the schemes reached RM1.5 billion, benefitting nearly 7,000 families. For the agriculture sector, a microfinancing programme was launched in November 2017 to finance agro-based micro-entrepreneurs from the B40 group. As at end-2017, total financing amounting to RM5.1 million was channelled to more than 1,000 agro-based microfinance accounts.

Given the role of DFIs in developing and promoting socio-economic mandates, it is imperative that the performance measurement framework for DFIs look beyond traditional financial performance indicators such as volume of financing and loan growth. Greater focus should instead be placed on broader measures to critically evaluate DFIs' performance. A more holistic performance measurement system is therefore critical to quantify DFIs' developmental impact on the economy, community and environment. This in turn will strengthen their accountability in achieving their mandate and focus their resources on areas that deliver the greatest development impact for a given social cost.

To this end, the Bank worked with the industry during the year to implement comprehensive and robust performance measurement frameworks across DFIs. The frameworks aim to better capture developmental, in addition to financial, indicators to measure the socio-economic contributions of DFIs to the economy and society. These include:

- the extent of positive (or negative) spillovers generated from a DFI's funding and business activities to the community such as number of jobs created, improvements in standards of living of the low income group, and better governance and financial management of targeted businesses;
- effectiveness of DFIs in expanding private sector investments (through loans, equity or guarantees) into new growth areas; and
- contribution of DFIs to the development and implementation of relevant Government policies to catalyse the growth of targeted sectors of the economy.

New performance measurement frameworks being implemented to better capture the developmental impact of DFIs

REGULATORY AND SUPERVISORY FRAMEWORK

Regulatory and supervisory activities in 2017 continued to be directed towards strengthening the resilience of the banking sector, while remaining supportive of the financial needs of the economy. Efforts were wide-ranging, focusing on further raising the governance standards and risk management practices within banks, and the domestic implementation of Basel III standards (Diagram 2.5).

Implementing Basel III standards

The implementation of Basel III standards remains a regulatory priority for the Bank (Diagram 2.6). The standards aim to strengthen the resilience of banks by raising the level and quality of regulatory capital, restraining leverage and improving liquidity

Diagram 2.5

Summary of Key Prudential Standards Issued in 2017

Leverage Ratio

- Non-risk-based measure to restrict build-up of excessive leverage
- Minimum ratio of 3%, effective 1 January 2018

Stress Testing

- Enhanced requirements to achieve a more informed and forward-looking assessment of risks, which include:
  - multi-year stress tests (minimum time horizon of three years); and
  - reverse stress tests to identify tail risks

Credit Risk

- The exposure draft reinforced expectations on board-level governance arrangements and role of risk management in the credit approval process
- Elevated standards for credit loss estimation
- Strengthened management of exceptional credits, credit concentration, country and transfer risks
- Introduced group-wide credit risk oversight expectations

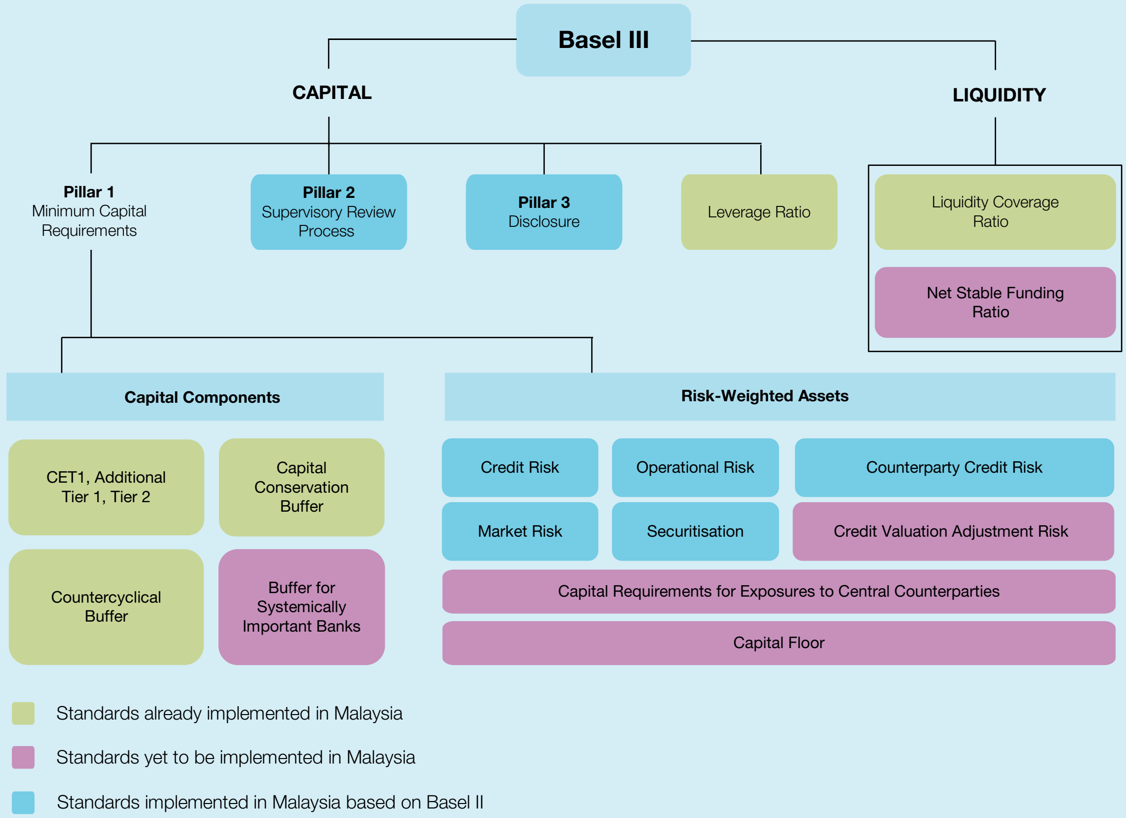
Net Stable Funding Ratio

- The exposure draft outlined the liquidity standards that require a stable funding profile to support banks' operations
- Minimum ratio of 100%
- Implementation no earlier than 1 January 2019

Source: Bank Negara Malaysia

Diagram 2.6

Implementation of Basel III Standards in Malaysia



Source: Bank Negara Malaysia

Measurement of Leverage Ratio (LR)

$$LR = \frac{\text{Tier 1 Capital}}{\text{Total LR Exposures}} \geq 3\%$$

where Total LR Exposures is the sum of on- and off-balance sheet exposures, derivative exposures and securities financing transaction exposures

management. Implementation is informed by careful assessments of the operational effects and impact of the standards on domestic intermediation and market development, in order to identify and manage potential unintended consequences.

In December 2017, the Bank issued the final Leverage Ratio (LR) standards for banks. The LR reinforces the risk-based capital requirement with a simple, non-risk-based backstop measure. The minimum ratio of 3% became effective on 1 January 2018, in line with the globally agreed timeline. As expected, banks transitioned smoothly, with all banks comfortably meeting the 3% minimum requirement. As at end-2017, the banking system leverage ratio stood at 7.8%, with 94% of banks reporting an LR of at least 6% (2016: 7.7%; 94% of banks). Given the strong capital position, the implementation of LR is not expected to constrain intermediation activities nor require banks to raise additional capital.

In September 2017, the Bank published the exposure draft on Net Stable Funding Ratio (NSFR) for a two month consultation. The NSFR requires banks to maintain sufficient stable funding in relation to their asset profile and off-balance sheet obligations over a one year horizon. The Bank proposed for the NSFR to be implemented no earlier than 1 January 2019, taking into account operational enhancements required to prepare for its implementation and the overall sequencing of Basel III standards that are being gradually introduced for the banking sector.

Following industry feedback received during the consultation period, the Bank is currently assessing specific areas of NSFR, including where: (i) further domestic customisation may be appropriate (e.g. treatment of off-balance sheet obligations); and (ii) further clarification may be warranted (e.g. illustrations on interdependent asset-liability pairs). Ongoing impact assessments and engagements over the coming months will continue to inform the Bank's final implementation approach. The Bank intends to finalise the standards in the first half of 2018.

Banks with NSFR levels currently below 100% would need to adjust their balance sheets. Based on engagements with the industry, such adjustments are more likely to involve the liability side of the balance sheet. While this may exert some upward pressure on funding cost, the later implementation date provides additional time for banks to undertake the necessary steps to rebalance their funding profiles. Accordingly, the Bank expects any impact on borrowing cost to be more manageable. As at end-2017, the average NSFR for the banking industry (based on observation period reporting) stood at 107.6%, with 76% of banks reporting NSFR levels at or above 100% (2016: 103.2%; 55% of banks).

Domestic implementation of the remaining components of Basel III will consider relevant modifications to reflect domestic conditions and risks

On the global regulatory front, the Group of Central Bank Governors and Heads of Supervision, which is the oversight body for the Basel Committee on Banking Supervision (BCBS), endorsed the outstanding Basel III post-crisis regulatory reforms in December 2017 (Diagram 2.7). The endorsement includes a delayed implementation timeline to 1 January 2022 (previously set at 2019) for the revised minimum capital requirements for market risk. The deferment thus aligns with the implementation date of the revised capital standards for credit risk and operational risk, and allows more time for necessary systems and infrastructure enhancements. At present, there remains a number of components of the Basel III reforms that have yet to be implemented in Malaysia. Together with the recently endorsed elements of the Basel III reforms package, the Bank expects to develop and communicate proposals for domestic implementation over the next few months, taking into account relevant modifications to reflect domestic conditions and risks.

Diagram 2.7

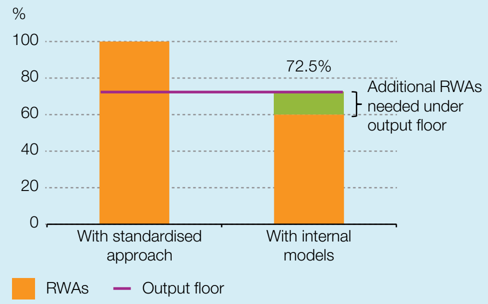
Elements of Outstanding Basel III Regulatory Reforms

1 **Enhance robustness and risk sensitivity of standardised approaches for calculating:**
(a) Credit Risk;
(b) Credit Valuation Adjustment (CVA) Risk; and
(c) Operational Risk

2 **Constrain use of internal model approach**

- Remove use of internal model approach for CVA and Operational Risk
- Limits on certain inputs used to calculate capital under the internal ratings-based approach for Credit Risk

3 **Output floor of 72.5% of banks' risk-weighted assets (RWAs) computed using standardised approach**



4 **Higher Leverage Ratio requirement for global systemically important banks**

Source: Basel Committee on Banking Supervision

Enhancing credit risk management and provisioning practices

The Bank finalised the revised standards on Credit Risk in January 2018 to replace the 2001 guidelines. The revised standards advance various aspects of credit risk management practices of financial institutions which are necessary to reflect developments that have occurred over the years (Diagram 2.5). These include diversity of product offerings, growing cross-border operations of financial institutions and further deepening of the domestic capital market as an alternative source of financing particularly for large businesses. Requirements under the enhanced standards will take effect from 1 July 2018 for banks, while a longer transition period has been granted for insurers and takaful operators that will be implementing the standards for the first time.

The revised standards, which require the use of more advanced credit loss estimation approaches by financial institutions, also support the implementation of the Malaysian Financial Reporting Standards 9: Financial Instruments (MFRS 9) which became effective on 1 January 2018. The forward-looking approach of the new impairment rules under MFRS 9 requires financial institutions to estimate expected credit losses throughout the lifetime of credit facilities, having regard to wider macroeconomic developments. This contrasts with MFRS 139, where impairment provisions are recognised only when there is objective evidence of impairment (Diagram 2.8).

While higher provisions are expected under MFRS 9, the estimated magnitude of impact on banks' earnings and capital is within the Bank's expectations. The impact would be largely mitigated by the regulatory reserve requirement which banks are allowed to use to offset the increase in provisions. As a result, despite the higher provisions, banks continue to maintain capital levels well above the regulatory minimum.

Having regard to the inherent subjectivity of MFRS 9 and data limitations that may be encountered in the initial operationalisation period, the Bank decided to

Key Revisions to Final Standards on Credit Risk following Industry Feedback

- Expanded scope of acceptable credit risk mitigation measures to ensure more accurate estimation of credit risk
- Flexibility on the governance arrangements to manage problem credit, commensurate with its severity
- Greater clarity on the independent credit review function to ensure continued effectiveness of post-approval review activities

Diagram 2.8

MFRS 9 Provisioning Requirements

MFRS 139

Incurred loss approach
- Impairment provisions are recognised only when there is objective evidence of impairment

MFRS 9

Expected credit loss (ECL) approach
- ECL is estimated based on historical, current and future information

Adopts a three-stage approach to reflect credit quality

	Stage 1	Stage 2	Stage 3
Credit quality	Performing (No significant increase in credit risk)	Underperforming (Significant increase in credit risk)	Non-performing (Default/credit impaired)
Provision allowance	12 month ECL	Lifetime ECL	Lifetime ECL

Source: Bank Negara Malaysia

Recalibrated Computation of Regulatory Reserve Requirement

Stage 1 and 2 provisions plus regulatory reserves $\geq$ 1% of total credit exposures*, net of Stage 3 provisions

* excluding exposures to Government of Malaysia, Bank Negara Malaysia, banks and prescribed DFIs

maintain the regulatory reserve requirement for at least two more years beginning 1 January 2018. Banks are also expected to further refine and recalibrate the MFRS 9 models to ensure that changes in credit quality and risk profile are captured in a timely manner and that sufficient provisions are made to buffer against a deterioration in asset quality.

Heightened vigilance on operational risk

A trending issue for banks has been the growing exposure to operational risk. In February 2017, the Bank initiated an inaugural industry-wide survey on Emerging Operational Risk to study the risk landscape of the Malaysian banking sector. Chief risk officers of banks shared various perspectives on risks that were of paramount concern to their organisations. Details on the survey results were shared with the industry via the MYHORIZON report in January 2018. The report also provides a consolidated view of actual loss events reported during the year and discusses the range of actions and steps financial institutions can consider to mitigate similar losses going forward. This information aims to offer useful insights on emerging risk developments as input for banks to improve their operational risk management frameworks. While an increasing number of banks have strengthened their operational risk functions to improve the management and oversight of operational risk, developing talent with the necessary skill set and experience to support enhancements to systems and controls continues to be a key priority for banks.

Banking Sector: Top 5 Operational Risks in Malaysia

1. Cyber threat
2. Non-adherence to regulatory requirements
3. Fraudulent applications for banking products
4. Human errors in task execution
5. Inaccurate or incomplete reporting

Promoting fair and responsible business conduct

The Bank continues to focus its efforts to further promote fair, responsible and professional business conduct by banks and payment instrument issuers. Over the years, banks have made significant strides in strengthening governance arrangements and internal controls. Equally important is for banks to also continue to enhance the quality of services and products offered to consumers and safeguard confidentiality of customer information.

During the year, the Bank conducted thematic reviews on: (i) quality of disclosures by banks on financial products offered; (ii) practices in the imposition of fees and charges on customers; and (iii) effectiveness of internal controls for safeguarding customer information. Based on findings from the thematic reviews, the Bank has taken supervisory and enforcement actions against 35 banks and payment instrument issuers. These included cease and desist orders on excessive or prohibited fees and charges issued against three institutions. The Bank also issued directions to 33 institutions to improve product disclosures and to strengthen processes for safeguarding customer information and resolving customer complaints.

Managing organisational culture and misconduct risk

The momentum in shaping sound core values within financial institutions gained further traction in 2017. Building on the Corporate Governance standards issued in 2016, the Bank's supervisory framework was enhanced to incorporate a specific focus on organisational culture when assessing overall safety and soundness of financial institutions. Many of the issues plaguing financial institutions can be addressed by creating a more robust and ethical operating environment and organisational culture. Findings from the Bank's MYHORIZON report lent further support to the importance of organisational culture where 65% of reported losses were found to be associated with internal fraud, regulatory non-compliance and operational lapses.

The Bank will accord greater focus on culture in its supervisory activities

In assessing the key drivers of organisational culture (Diagram 2.9), the Bank takes into account both financial and non-financial aspects. The focus of

Diagram 2.9

Key Drivers of Organisational Culture of Financial Institutions

Source: Bank Negara Malaysia

supervisory assessments considers the financial institutions' business model and structure, and the impact of control functions and internal interactions (between the board and senior management, and between senior management and staff) on behaviour (Diagram 2.10).

From observations of the non-financial aspects of organisational culture (such as recruitment, capacity building, compensation and performance management, and whistleblowing), banks appear to be increasing efforts to ensure that risk appetite and policies reflect the core values and capacity of the institution to take on and manage risks. Banks also continue to improve the implementation of risk-aligned remuneration frameworks, for example through introducing deferred or multi-year remuneration payments. Going forward, the Bank will continue to place importance on the culture of financial institutions as part of its ongoing supervisory activities. Financial institutions are therefore expected to direct efforts to foster sound culture and conduct within the organisation. These should include: (i) improving performance management practices via more balanced key performance indicators; (ii) maintaining effective channels of communication for whistleblowing; and (iii) strengthening pre-employment screening processes.

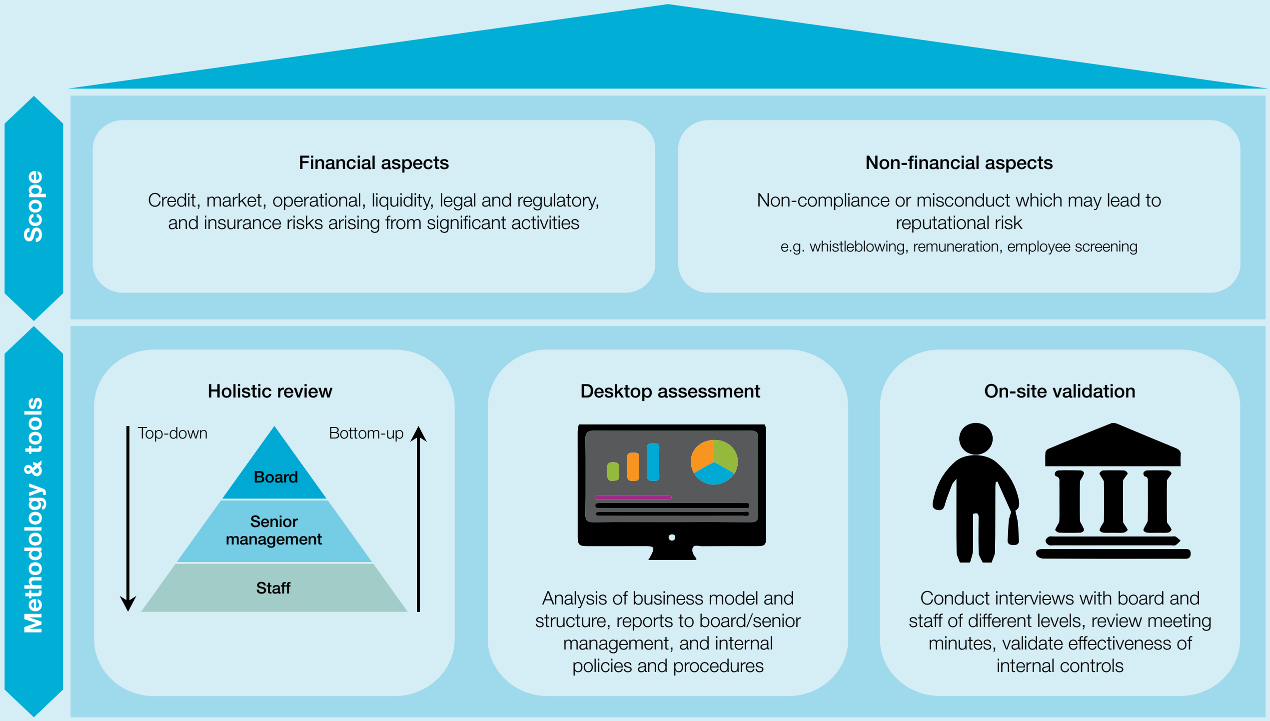
REGIONAL AND INTERNATIONAL COOPERATION

Close cooperation with home and host supervisors remained a key priority in supporting the Bank's supervisory activities during the year. In April 2017, the Bank signed an MoU on Banking Supervision and Financial Development Cooperation with the Bank of Thailand. The collaboration supports the effective supervision of banks with operations in both Thailand and Malaysia amid deepening trade and investment linkages, and greater cross-border banking activities particularly in the Asian region. It also facilitates closer cooperation to ensure sustainable development and financial sector resilience, including in the areas of market conduct supervision, consumer protection, financial inclusion and literacy, and combating financial crime.

In 2017, the Bank participated in supervisory college meetings of six foreign financial institutions with operations in Malaysia, and hosted one for a domestic banking group.

Diagram 2.10

Supervisory Assessments on Organisational Culture of Financial Institutions



Source: Bank Negara Malaysia

These meetings continue to be a key platform for exchanging key supervisory concerns and coordinating supervisory activities involving cross-border financial groups. Bilateral engagements were also held with the Financial Services Authority of Indonesia in July 2017 and Hong Kong Monetary Authority in October 2017. These engagements covered assessments of economic and financial conditions in the home and host countries, sharing of developments on supervisory frameworks, and concerns and actions taken to address emerging risks. Such engagements continue to play an important role in supporting the Bank's ability to identify and respond to identified risks affecting Malaysian banks in a timely manner, working together with its counterparts.

AKPK – Advancing Prudent Financial Behaviour

By Sahara Hashim and Ili Syazana

Introduction

Agensi Kaunseling dan Pengurusan Kredit (AKPK) is an agency established by the Bank in 2006 to provide advisory services and assistance to individual borrowers in managing their finances. It contributes to a sound and robust financial system by creating a financially savvy society through the provision of three core services namely: (i) one-to-one financial counselling and advice on money management skills; (ii) a personalised debt management programme; and (iii) financial education. More than three million individuals have benefitted from the programmes and initiatives conducted by AKPK since its inception.

This article discusses the progress made by AKPK in carrying out its mandate to promote prudent financial behaviour, describes the profile of indebted borrowers and sets out AKPK's priorities moving forward.

Towards Financial Prudence

Financial counselling and advice

Since its inception, AKPK has provided financial counselling and advice to 683,169 individuals. This reflects AKPK's goal to equip individuals with the essential ability to manage money wisely, so that they spend within their means and achieve financial goals. AKPK provides free, one-to-one financial counselling and practical advice on money management to help individuals control their spending and debt. This is provided through its 11 branches, and 18 counselling offices nationwide via the branch network of commercial and Islamic banks. In addition, AKPK leverages on its strategic partners, including Government agencies and non-government organisations, in offering counselling at the work place.

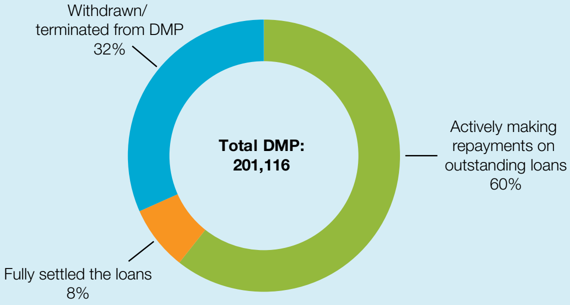
Debt Management Programme

Out of the total number of individuals who had sought financial counselling and advice from AKPK, 29% of them were enrolled into the Debt Management Programme (DMP), a personalised programme to provide eligible borrowers with solutions for their financial situation. These individuals represent a total debt value of RM21.7 billion. To date, 15,439 borrowers representing 8% of DMP participants have fully settled their debts and graduated from the programme. About 60% of DMP participants remain active in servicing their debt while the remaining 32% had either withdrawn from the DMP or had their participation terminated (Chart 1). Common reasons for withdrawal or termination include improved financial circumstances that enable borrowers to fully settle or manage the debt on their own, the death of a participant, or the inability to make debt repayments on a consistent basis.

Proactive interventions by AKPK play an important role in supporting DMP participants in meeting and sustaining their repayment obligations. These include issuing early payment reminders, offering a 'Second Chance' programme to prospective defaulters and active monitoring of payments from all new DMP participants during the first three months after being enrolled into DMP under the 'Early Care' initiative to shape good repayment habits. These interventions have contributed towards reducing the numbers of borrowers that are terminated from DMP, from 35% in 2016 to 25% in 2017. In addition, the annual debt collected by AKPK under the DMP have increased significantly to RM877 million in 2017 (2007: RM21.7 million). Of the amount collected thus far, over 80% was paid promptly by borrowers.

Chart 1: Status of DMP Participants as at end-2017

Majority of DMP participants are actively making repayments



Source: Agensi Kaunseling dan Pengurusan Kredit

The DMP has also had an important impact in reducing bankruptcies. It is estimated that about 20% of the borrowers who had enrolled into DMP were at the early stage of bankruptcy proceedings or foreclosure of their properties. Once borrowers are enrolled into the DMP, participating financial institutions (PFIs) will provide moratorium on the bankruptcy or foreclosure proceedings to enable all parties to agree on repayment plans. This also helps to reduce the number of bankruptcy cases that need to be handled by the court.

The PFIs have also benefitted from the DMP. The PFIs are able to recover the defaulted loans from the borrowers without resorting to court processes which are time consuming and costly. Since the inception of AKPK, the PFIs have recovered about RM4.5 billion of defaulted loans that would otherwise need to be written off. The PFIs also benefitted from the savings of fees payable to debt collection agencies, generally between 15% to 25% of the amount recovered, compared to a nominal fee of 3% paid to AKPK.

All of the above can be attributed to three key roles of AKPK in administering the DMP: (i) building support and agreement among PFIs on debt restructuring terms that can be reasonably met by distressed borrowers; (ii) counselling on financial management and lifestyle changes which are critical to help borrowers regain control of their debt; and (iii) active monitoring and follow up on borrowers that are more likely to fall behind on payments. To further assist DMP participants who have fully settled their debts, AKPK is in the process of rolling out a post-programme initiative to provide continuous guidance and support to these customers. It aims to systematically track behavioural changes and ensure that positive financial behaviour is sustained.

Financial literacy—a more inclusive financial education and outreach

AKPK's financial education modules are designed to address the different needs and circumstances that arise at different life stages - from young adults in tertiary education; entering the workforce and starting a family; to senior citizens in their retirement. Financial education programmes also aim to address the specific challenges that are faced by more vulnerable groups in the bottom 40% (B40) and middle 40% (M40) income groups. Key topics covered include the importance of saving and how to save, setting financial goals, selecting financial products that match needs and goals, budgeting, basic borrowing and debt management.

Financial education publications by AKPK are available in four main languages and are continuously updated to incorporate new financial management tools and behavioural observations. AKPK's financial education initiatives have also been advanced further at the university level where a Personal Financial Management course was introduced as an elective or an extra-curriculum programme to teach young adults good personal financial management before they enter the workforce. A total of 34 higher learning institutions have infused AKPK's Personal Financial Management module in their respective curriculum (Diagram 1).

Diagram 1

AKPK's Financial Education Modules and Publications

2015

Financial education modules for four key life stages
- To empower consumers with knowledge, skills and tools to build, manage, and protect their personal wealth
- Designed based on specific life events (i.e. tertiary education, entering workforce, starting and raising a family, and retirement) to ensure an impactful financial education that reaches its targeted consumers

2012

Self-Help Guide on Debt Relief Plan
- Aimed at guiding and empowering consumers who wish to manage their debts on their own

2011

***POWER!* Managing Your Debts Effectively**
- Targeted primarily at young individuals and new borrowers, aims to empower individuals to manage their finances effectively
- Provides practical financial knowledge, skills and tools to help in making sound and responsible borrowing decisions

2008

Money $ense
- A tool to promote financial literacy across various target groups
- Developed based on real-life experiences of customers who have sought AKPK's credit counselling and enrolled into AKPK's DMP
- Further developed into a Personal Financial Management module and taught to trainees of Program Latihan Khidmat Negara until 2014

Old Master Q Money Management Comic
- To convey financial education in a simple, fun and easy to understand manner

Source: Agensi Kaunseling dan Pengurusan Kredit

Ensuring that all Malaysians have access to its services has always been one of AKPK's priorities. Acknowledging that its financial education initiatives need to be responsive to individuals from all walks of life, and provide flexibility for individuals to receive information at times and in ways that they prefer, AKPK introduced an online microsite platform (ask.akpk.org.my). The online learning portal is filled with financial education advice and tips, budget planning tools and financial calculators to help consumers manage their finances. AKPK has also sought new ways to reach out to financial consumers through digital platforms such as Facebook, Instagram and YouTube, which have attracted more than 10 million viewers.

Indebtedness—who and why?

Poor financial planning consistently ranks as the top reason why DMP participants default on their debt (Diagram 2). Without proper financial planning, individuals are at risk of spending beyond their means and supporting such spending through the build-up of substantial debt (Case 1).

Case 1

Mazyun and Mazlan, a young married couple, worked as an interior designer and bank executive respectively. Despite just starting out in their careers in urban Kuala Lumpur, and with little savings set aside, they racked up a substantial amount of housing, personal and credit card debt to finance a lavish lifestyle. Over just four years, they had accumulated a total debt of RM1.2 million on a combined salary of RM20,000 per month.

The unexpected termination of Mazlan's employment contract plunged the couple into serious financial hardship, with Mazyun unable to sustain repayments on the couple's multiple loans on a single income source.

More than 73% of DMP participants are from the lower monthly income bracket of below RM4,000. Many of these DMP participants become indebted due to insufficient savings which leave them unable to cope with large unforeseen expenditures, such as medical emergencies. Matters are compounded when they are forced to rely on more expensive forms of debt such as credit cards and personal financing, to deal with financial challenges. Consequently, they are more likely to fall into greater debt (Case 2).

Case 2

Azmi works as a factory supervisor with a monthly income of RM3,000. He is married with three school going children. He was servicing his loans as scheduled, and spent what was left of his savings on local holidays with his family.

His financial difficulties started when his wife fell ill. With no savings or insurance to fall back on, he took up personal loans and used credit cards to pay for his wife's medical treatment. Struggling to meet his debt repayments and family expenses, he eventually defaulted on his debt obligations. His children withdrew from school when Azmi could not afford to pay for their school books.

In general, individuals who have a tendency to spend beyond their means are likely to accumulate higher debts, which if not managed appropriately would lead to financial distress. In this instance, AKPK provides counselling services to highly indebted individuals, particularly on the need to make lifestyle changes. The majority of DMP participants who successfully completed the programme have been observed to change their behaviour. This includes getting into the habit of saving, developing household budgets and spending modestly.

Case 3

Ali works as a Finance Manager with an insurance company. He has two children with a net household monthly income of approximately RM5,500. He lived a lavish lifestyle with no financial planning for his future. His total credit card debts and personal financing debt amounted to RM100,600 with monthly repayments totalling RM4,125. He could not pay his debts solely based on his monthly salary.

Ali enrolled into the DMP in 2009. Throughout the programme, Ali adjusted his household expenditure by cutting down on expensive food and clothings. The change in lifestyle enabled Ali to pay off his debts. He was also able to set aside some money for his family's medical insurance and children's education. Ali successfully completed DMP in June 2012, one year ahead of the DMP schedule.

Greater access to financial services and a highly competitive market can further add to challenges faced by individuals. In particular, behaviours of financial institutions that actively promote financial products that may not be suitable for certain consumers, have made it even more important for individuals to have the knowledge to make sound financial decisions. This has also become more important to guard against a proliferation of investment scams.

AKPK's strategies and approaches aim to deliver interventions that focus on individuals who are likely to be more vulnerable to financial hardship. To this end, AKPK has increased its presence in major cities. In 2017, 32% of the total financial education programmes were conducted in Kuala Lumpur and Putrajaya, and 84% of financial education and counselling activities have specifically targeted individuals who are starting and raising families.

Diagram 2

Profile of AKPK's DMP Participants

Profile of Participants		
Income level	73%	have monthly household income of less than RM4,000 with limited savings
Location	64%	live in urban areas with high costs of living (e.g. Kuala Lumpur, Penang, Johor)
Age group	40%	are between 30 to 40 years old with growing family and multiple debts (e.g. mortgage, car financing)
Employment	64%	are working in the private sector with no salary deduction option
Borrowing type	93%	have unsecured debts through credit cards or personal loans

Top Reasons for Accumulating Excessive Debt		
Poor financial planning	43%	• Lack of personal financial management knowledge • Do not differentiate between needs and wants
Unexpected shocks	18%	• Loss of employment or death of breadwinner • Unexpected medical expenses
Limited savings	18%	• Unable to cope with living expenses when business fails or slows down, or when income stream becomes unstable
Lifestyle spending	7%	• Spending beyond means
Financial scams	4%	• Taking financing to invest in financial schemes promising unrealistically high returns

Source: Agensi Kaunseling dan Pengurusan Kredit

Priorities Going Forward

National strategy on financial literacy

A national strategy on financial literacy is being formulated by the Financial Education Network (FE Network)[1] to elevate financial literacy among Malaysians. As an FE Network member, AKPK will coordinate with its partners within the network to align and increase the reach and impact of financial education programmes targeted at young and working adults. New approaches for measuring the effectiveness of these programmes will also be pursued.

Holistic approach to financial rehabilitation—going beyond bank credit

Since 2014, AKPK's services have been expanded to include individuals with borrowings not only from financial institutions regulated by the Bank but also several large non-bank financial institutions such as Malaysia Building Society Berhad, credit cooperatives and Perbadanan Tabung Pendidikan Tinggi Nasional. This has enabled AKPK to provide more comprehensive solutions to borrowers, and enlarge the number of individuals who can access its services. Moving forward, efforts are underway to extend coverage of the DMP to include customers of other non-bank credit institutions. This is also in line with the recent appointment of AKPK by the Government as a nominee for the Voluntary Arrangement scheme (a pre-bankruptcy rescue mechanism) under the Insolvency Act 1967 [Bankruptcy (Amendment) Act 2017]. As the appointed nominee, AKPK would manage a process to provide financial consumers with the opportunity to restructure and/or reschedule their debt before they are declared bankrupt.

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1 FE Network members comprise of the Bank, Securities Commission Malaysia, Ministry of Education, Ministry of Higher Education, Employees Provident Fund, Perbadanan Insurans Deposit Malaysia, AKPK and Permodalan Nasional Berhad. The FE Network serves as an inter-agency platform to increase the impact of financial education initiatives and identify new opportunities for improving financial literacy among the Malaysian public through greater alignment, closer collaboration and a strong focus on impact assessments.

Conclusion

As individuals gain greater access to financing, it becomes increasingly important that they practice prudent and responsible financial behaviour. AKPK plays an important role in this mission, not just to assist borrowers in trouble but to advocate greater financial literacy among all Malaysians. AKPK is committed to building on its deep knowledge of financial consumer attitudes and behaviour, and its strategic position as a trusted adviser within the financial ecosystem, to help more individuals make effective use of financial services to improve their welfare while contributing to broader financial stability.

Insurance and Takaful Sector

Insurance and Takaful Sector

PERFORMANCE OF THE INSURANCE AND TAKAFUL SECTOR

The insurance and takaful sector maintained its growth momentum in 2017. Total premiums and contributions increased by 3.5% to RM63.5 billion (2016: 4.4% to RM61.3 billion), while total insurance and takaful assets increased by 8.1% to RM309.0 billion (2016: 5.0% to RM277.0 billion). The industry remained strongly capitalised, reporting an aggregate capital adequacy ratio of 233.8% as at end-2017, well above the 130% minimum required. Capital in excess of the regulatory minimum totalled RM38.7 billion (2016: RM37.9 billion).

Total premiums and contributions increased by 3.5%, while total insurance and takaful assets grew by 8.1%

There were 55 insurers and takaful operators, including reinsurers and retakaful operators as at end-2017 (Table 3.1 and Table 3.2). During the year, a composite insurer converted into a life insurer. The remaining composite insurers and takaful operators are on track to split their operations into separate life/family and general businesses as required under the Financial Services Act 2013 and Islamic Financial Services Act 2013. The number of approved insurance and takaful brokers and financial advisers increased to 57 (2016: 56). In 2017, 45 loss adjusters (2016: 43) were registered under the Financial Services Act 2013.

Table 3.1

Number of Insurers and Takaful Operators

Categories	Number
Life insurer	11
General insurer	19
Composite insurer	3
Family takaful operator	3
General takaful operator	8

Source: Bank Negara Malaysia

Table 3.2

Number of Reinsurers and Retakaful Operators

Categories	Number
Life reinsurer	1
General reinsurer	5
Composite reinsurer	1
Retakaful operator	4

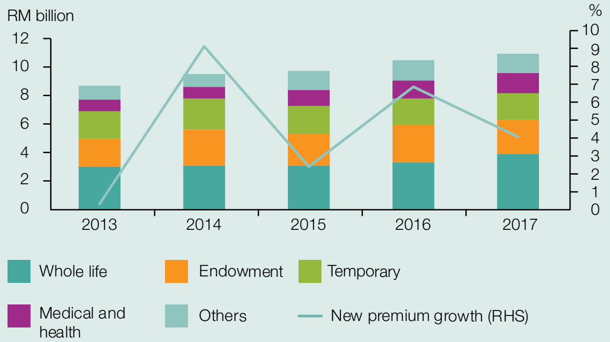
Source: Bank Negara Malaysia

Life insurance and family takaful

Life insurers and family takaful operators continued to record positive growth in new business, with new premiums and contributions increasing by 5.8% to RM15.1 billion in 2017 (2016: 7.5% to RM14.2 billion) (Chart 3.1 and Chart 3.2). The overall product type composition of life insurance and family takaful remained broadly unchanged (Chart 3.3), continuing the trend over the past five years. Whole life, endowment, mortgage-related term insurance and takaful products continued to dominate the share of new premiums/contributions, collectively making up 64.8% of total new premiums/contributions.

Chart 3.1: Life Insurance Sector – New Premium Growth and Breakdown by Product Type

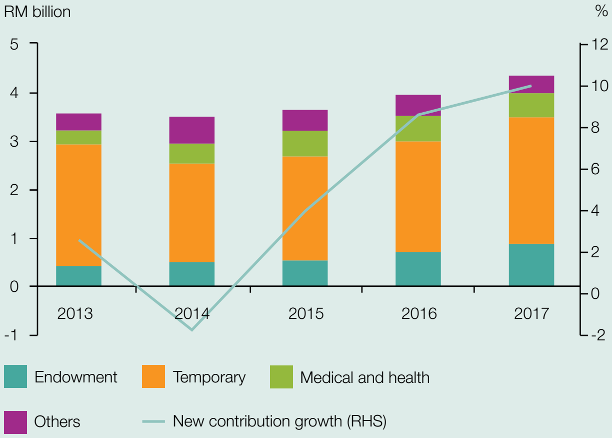
Positive new premium growth recorded for the life insurance sector



Source: Bank Negara Malaysia

Chart 3.2: Family Takaful Sector – New Contribution Growth and Breakdown by Product Type

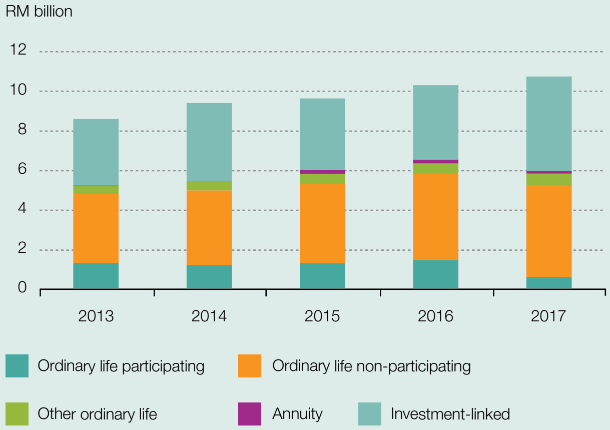
The family takaful sector continued its growth momentum



Source: Bank Negara Malaysia

Chart 3.4: Life Insurance Sector – New Premium Breakdown by Product Class

Investment-linked products were the key driver for life insurance new premium growth

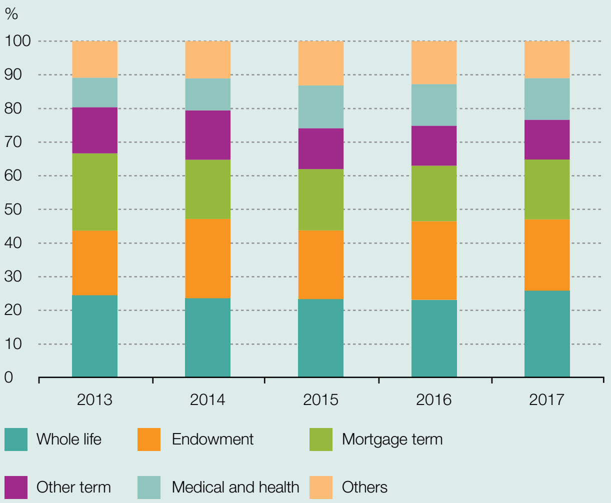


Source: Bank Negara Malaysia

In terms of product class, investment-linked products were a key growth driver in the life insurance sector, accounting for 44.5% of new premiums. Investment-linked insurance new premiums grew 26.3% in 2017, well above the 3.6% annual growth seen between 2013 and 2016, due to a distinct shift in strategic focus from ordinary life participating products to investment-linked products (Chart 3.4). The decline in new business of ordinary participating products (2017: -58.9%, 2016: 11.7%) was in part due to lower illustrations of returns which were more appropriate to inform purchasing decisions (refer to subsection on 'Enhancement to sales illustrations for participating policies'). However, as it reduced the perceived

Chart 3.3: Life Insurance and Family Takaful Sector – Composition of New Premium and Contribution by Product Type

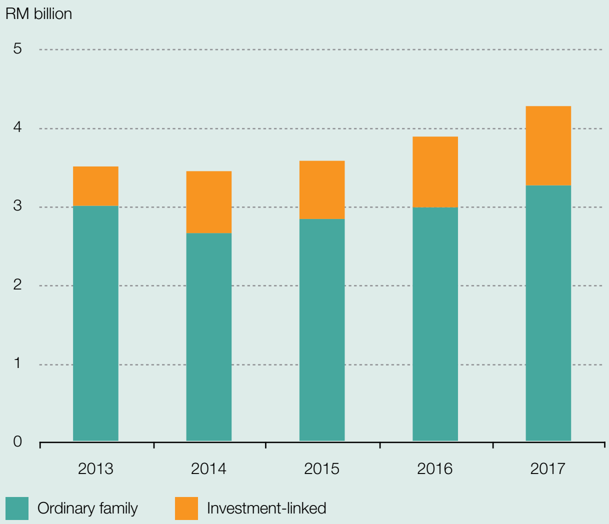
Life insurance and family takaful product composition remained broadly unchanged



Source: Bank Negara Malaysia

Chart 3.5: Family Takaful Sector – New Contribution Breakdown by Product Class

New contribution growth in the family takaful sector driven by ordinary family products



Source: Bank Negara Malaysia

attractiveness of the products, sales strategies by insurers and agents saw a bigger shift in focus to investment-linked products. For the takaful sector, ordinary family products grew by 9.5% (2016: 5.2%) (Chart 3.5), driven mainly by increased demand for mortgage-related term policies as a result of growth in Islamic financing.

The industry continued to generate surpluses in tandem with overall growth in 2017, contributed by surpluses arising from new business, insurance and investment margins. Excess income over outgo stood at RM18.8 billion (2016: RM13.3 billion).

General insurance and takaful

In the general insurance and takaful sector, gross premiums and contributions declined marginally (2017: -0.4%; 2016: 1.7%) (Chart 3.6). Positive growth in the motor, fire and medical businesses, the three largest contributors to gross premiums and contributions, was offset by the contraction in the offshore-oil segment (2017: -27.7%; 2016: -14.9%) in tandem with lower activity in the oil and gas sector. Excluding the offshore-oil business, the total gross premiums grew marginally by 0.4%. The motor segment grew 3.6% (2016: 0.5%) reflecting higher new car sales. At the industry level, the impact of the liberalisation of the motor tariff is not yet evident, given the short period of liberalisation to date and the overall cautious approach to making significant changes to pricing. Fire products also grew, albeit at a slower pace (2017: 0.9%; 2016: 1.4%), reflecting a softer market for large and specialised risk premiums due to favourable loss experience and excess capacity in the global property and casualty reinsurance markets. Medical business grew by 6.4% (2016: 20.2%). Excluding reinsurance and retakaful, direct medical business growth was stable at 7.3% (2016: 7.8%), supported by higher demand for group medical cover and higher average premiums and contributions.

The retention ratio of the general insurance and takaful sector remained flat at 76.0% as at end-2017 (Chart 3.7). No significant change was observed for all personal lines (motor, medical and health, and personal accident). Retention levels for marine, aviation and transit risks improved, increasing to 35.7% from 30.6% in 2016, due to the contraction in offshore-oil business, where retention tends to be lower. The proportion of overall premiums and contributions ceded to foreign reinsurers and retakaful operators has been increasing over the past five years (2013: 15.5%; 2017: 24.4%) reflecting the industry's limited appetite to locally retain larger and complex risks. This points to a need to significantly build domestic capacity, both in terms of improving the spread of risks at the industry level and strengthening technical expertise at the company level to underwrite complex risks.

The general insurance and takaful sector remained profitable in 2017, although less so than the past five years. Underwriting and operating profits declined by 24.3% to RM1.4 billion and 21.9% to RM2.7 billion

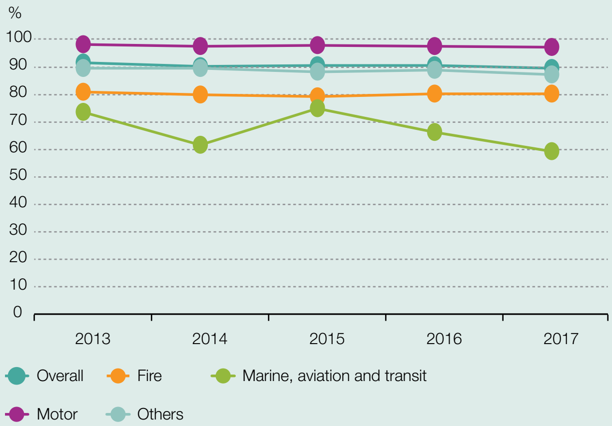
Chart 3.6: General Insurance and General Takaful Sector – Gross Premium and Contribution Growth and Breakdown by Business Line

Marginal decline observed for gross premiums and contributions

Source: Bank Negara Malaysia

Chart 3.7: General Insurance and General Takaful Sector – Retention Ratio

Retention levels for general insurance and takaful remained flat



Source: Bank Negara Malaysia

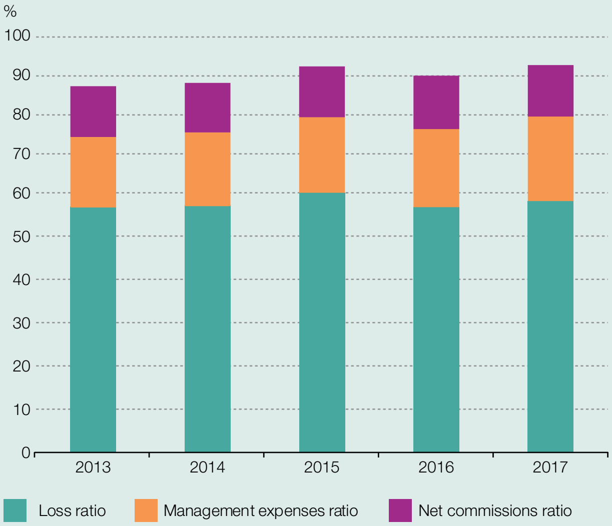
Chart 3.8: General Insurance and General Takaful Sector – Profitability

General insurance and takaful sector remained profitable

Source: Bank Negara Malaysia

Chart 3.9: General Insurance and General Takaful Sector – Combined Ratio

Overall loss ratio for the general insurance and takaful sector impacted by rising motor and medical claims

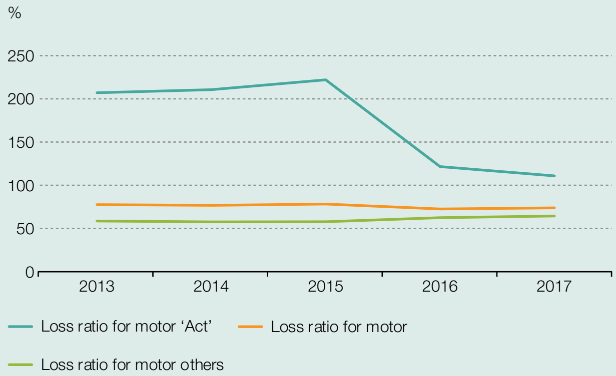


Source: Bank Negara Malaysia

respectively (Chart 3.8). The overall loss ratio for the sector increased to 58.3% from 55.9% in 2016 largely due to rising motor and medical claims (Chart 3.9). In contrast to the life and family sector however, investment income grew marginally to RM790.7 million (2016: RM775.3 million) for general insurance and RM99.9 million (2016: RM96.1 million) for general

Chart 3.10: General Insurance and General Takaful Sector – Loss Ratio of Motor Business Class

Loss ratio for motor business class increased



Source: Bank Negara Malaysia

takaful, reflecting the more conservative asset composition of the general sector which is invested largely in cash and fixed income assets.

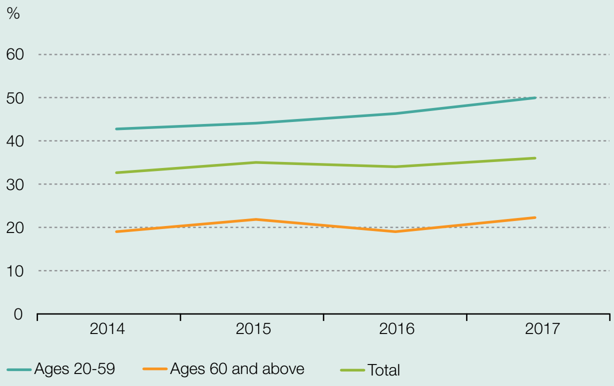
While the motor and medical segments posted relatively stronger premium growth, claims experience in both lines worsened. The overall loss ratio for motor products increased to 69.6% (2016: 66.0%) (Chart 3.10) due to higher frequency and severity of private car own damage claims, where severity was driven up by rising parts prices. The Malaysian Motor Insurance Pool (MMIP) is no longer a key contributor to motor losses, having posted underwriting and operating profits of RM54.0 million (2016: RM41.3 million) and RM122.5 million (2016: RM100.3 million), respectively, due to a better claims experience. The improved claims experience arose from more efficient claims management practices, which resulted in faster claims and a higher number of out-of-court settlements and therefore lower-than-expected claims settlement. Medical business as a whole experienced a sharply higher loss ratio of 83.2% (2016: 69.9%). However, excluding reinsurance and retakaful and focusing on direct business within Malaysia only, loss ratios remained stable at 71.0% (2016: 70.0%).

UPTAKE OF LIFE INSURANCE AND FAMILY TAKAFUL

Life insurance and family takaful uptake among Malaysians continued to see a gradual increase. The penetration rate of life insurance and family takaful, measured as a percentage of Malaysians who own at least one individual life insurance or family takaful policy

Chart 3.11: National Life Insurance/Family Takaful Penetration Rate by Age Bands

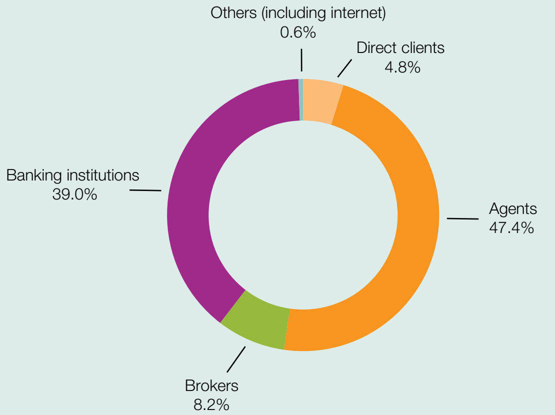
National life insurance and family takaful penetration rate grew marginally



Source: Bank Negara Malaysia

Chart 3.12: Life Insurance Sector – New Premiums Market Share by Distribution Channel

Agency force and bancassurance continue to be leading channels



Source: Bank Negara Malaysia

stood at 36.5% as at end-2017, compared to 34.5% in 2016 (Chart 3.11). The penetration rate is highest among those of working age (20 to 59 years old), the key segment of policy owners and participants. It also grew the fastest, reaching 50.4% at end-2017, up 3.6% from 2016 (46.8%). However, national-level growth over the past four years has been muted overall. Between 2014 and 2017, penetration grew by only 1.1 percentage points a year. This highlights the urgency for the industry to step up efforts to enhance their product offerings and business models towards meeting the needs and preferences of consumers.

Life insurance and family takaful penetration grew by only 1.1 percentage points over the past four years, highlighting the urgency for the industry to step up efforts to enhance their product offerings and business models

The agency and bancassurance channels continue to be the main drivers of new business constituting over 80% of the total new premiums of the life insurance sector (Chart 3.12). The online distribution channel, on the other hand, is still fairly new, with a small market share relative to other distribution channels. However, as the Bank continues to drive efforts to diversify distribution channels it is expected that the non-traditional channels will gain traction and contribute to a greater proportion of new business. Since July 2017, all life insurers and family takaful operators have been required to offer pure protection term products through direct distribution channels. Insurers and takaful operators are expected to fully leverage on the outreach potential of multiple channels and innovate their products to more closely match the needs of the various consumer segments, ultimately increasing insurance uptake.

REGULATORY AND SUPERVISORY POLICIES AND DEVELOPMENTS

The Bank continued to embark on regulatory and supervisory initiatives towards strengthening business conduct, preserving financial stability and widening the outreach of insurance and takaful. Key development milestones over the year include the rollout of Phase II of the liberalisation of motor and fire tariffs; the introduction of direct distribution channels and improvements to incentive structures under the Life Insurance and Family Takaful (LIFE) Framework; and the *Perlindungan Tenang* initiative. Focus was also accorded on implementing International Financial Reporting Standard 17: Insurance Contracts (IFRS 17), stress testing, and measures to strengthen the professionalism of insurance and takaful intermediaries.

Phased liberalisation of motor and fire tariffs

The liberalisation of the motor and fire tariffs entered its second phase in 2017. Phase II of the reforms, which commenced on 1 July, allows insurers and takaful operators to individually set pricing for two existing tariffed product lines based on the risk profiles of drivers and vehicles:

(i) 'Comprehensive' products, which provide coverage for third party losses and loss or damage to an insured's own vehicle due to fire, theft or any road accident; and
(ii) 'Third Party, Fire and Theft' (TPFT) products, which provide coverage for third party losses and loss or damage to an insured's own vehicle due to fire or theft only.

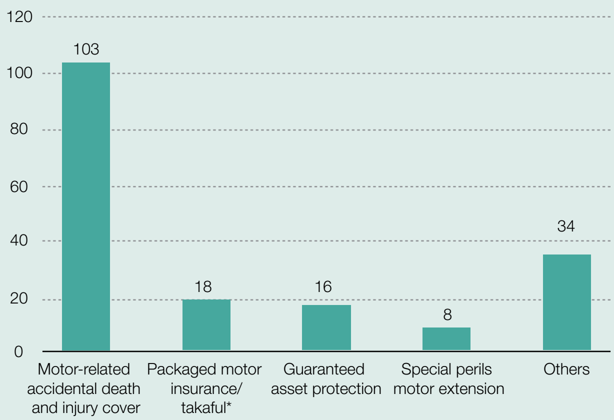
This follows from Phase I which took effect on 1 July 2016 where premiums for new motor and fire products outside the scope of the tariff were allowed to reflect market rates.

Starting from 2018, gradual tariff rate adjustments will be made to the remaining products under the tariffs, which are fire and motor third party products. An evaluation will be conducted in 2019 to pave the way for further liberalisation, taking into account market developments observed under the first two phases. The Bank will continue to monitor the impact of the liberalisation to ensure the orderly functioning of the insurance and takaful market in the public's interests.

A key objective of the phased liberalisation is to encourage innovation. This has been more pronounced in the fire and motor insurance businesses, where new motor products or extension covers were introduced by insurers (Chart 3.13). Notable examples include:

Chart 3.13: New Motor Products as at end-2017

New motor products are emerging from liberalisation of motor and fire tariffs



*Basic comprehensive coverage which is packaged with ancillary covers such as road assistance and personal accident insurance/takaful

Source: Bank Negara Malaysia

(i) Guaranteed Asset Protection (GAP) coverage on the difference between the outstanding loan amount or invoice value of the vehicle and the market value of vehicle in the event of a Total Loss due to fire, theft and accidental damage;
(ii) Limited special perils cover which provides more flexible cover for selected perils such as flood, storm and/or tempest. This type of cover was previously available only as a standardised packaged under the Motor Tariff;
(iii) E-hailing extension cover which extends private car insurance coverage during the use of the vehicle for e-hailing services; and
(iv) Usage-based insurance policies that compute premiums based on actual usage of vehicles as measured by telematics devices. This allows drivers who use their vehicles less often or practise safer driving to benefit from lower premiums.

Effects on pricing have also been observed across specific risk groups as insurers and takaful operators have begun to differentiate between lower and higher risks, consistent with more equitable pricing. Overall, average premiums per policy for 'Comprehensive' products remained broadly unchanged over the quarters of 2017. Premiums below the minimum motor tariff rates were, however observed across a range of vehicle makes and models. Where there were premium increases above the maximum motor tariff rates, these were for higher risk groups, particularly those more susceptible to theft. Moving forward, the Bank expects to observe greater differentiation in pricing as insurers and takaful operators increasingly adopt a wider set of risk factors in setting premiums, including vehicle security features, driving experience and behaviour, and the duration the vehicle is on the road.

The Bank is closely monitoring this transition. Premium revisions beyond a defined threshold are reviewed by the Bank and must be supported by empirical evidence. The Bank also increased its thematic reviews to evaluate compliance by insurers and takaful operators with stronger prudential and market conduct requirements. These include stronger governance over product development and pricing practices which should reflect a risk-informed approach and be consistent with the company's financial strength and risk appetite. Greater scrutiny by the board and senior management is also expected to ensure the suitability of products for identified target markets.

With more product options available, it is crucial that customers are able to make informed decisions when purchasing and renewing motor coverage. This is supported by a sustained public education and awareness campaign to educate the public on motor liberalisation. Beginning 2018, the Bank also regularly publishes information on premium developments on the Bank's website. In addition, tools made available by industry associations for comparing and selecting products provide a convenient means for customers to assess product information from multiple companies. The Bank continues to pursue broader reforms to increase the transparency and efficiency of motor claims management. This includes enhancing market infrastructure to provide more granular and reliable data for claims assessments, simplifying the claims process and addressing fraud.

In tandem with better customer experience at the point of sale, the Bank continues to pursue broader reforms to increase the transparency and efficiency of motor claims management

Life Insurance and Family Takaful Framework

Reform of the life insurance and family takaful sector continued to advance in 2017 and early 2018, with the issuance of the policy document on Direct Distribution Channels for Pure Protection Products, and revisions to the Guidelines on Operating Cost Controls for Life Insurance and Family Takaful Business to implement the Balanced Scorecard (BSC) framework.

(i) Implementation of Balanced Scorecard framework

Agency distribution continues to be an important channel for the life insurance and family takaful industry, contributing 47.4% of total new premiums in 2017. However, industry data suggests that overall productivity is low. Over half (65.2%) of life insurance and family takaful agents operate on a part-time basis and up to 64% of agents sell less than one policy per month. Three in four agents do not complete a comprehensive fact-find process for more than 80% of their customers, which increases the risks of unsuitable products being sold to policyholders. The BSC framework for agents, which took effect on 1 January 2018 aims therefore, to increase the level of professionalism of intermediaries. Under the BSC framework, 25% of total commissions to the intermediary will be subjected to meeting key performance indicators (KPIs) on productivity, persistency, customer fact-find, continuing professional development hours and complaints. This will better align incentives with higher standards of professionalism and productivity for insurance and takaful intermediaries.

The Balanced Scorecard framework will drive insurance and takaful intermediaries towards higher standards of professionalism and productivity

The KPIs and corresponding performance thresholds under the BSC were developed in consultation with the industry, including the National Association of Malaysian Life Insurance and Family Takaful Advisors (NAMLIFA), and piloted over one and a half years in 2016 and 2017. Expectations are for higher overall remuneration to the agency channel, lifted by more productive agents. The share of more productive agents is also expected to trend higher as the impact of poor performance on remuneration becomes increasingly felt. Importantly, the BSC also ensures higher standards are met in terms of product suitability assessments and service quality. The Bank has set expectations for the industry to ensure that agents who underperform are provided with the necessary remedial training. To this end, the industry is collaborating with the Financial Accreditation Agency to introduce individual accreditations for the agency force to raise professional and ethical standards and identify specific interventions for agents that do not meet the required standards. Over the longer run as alternative distributions, including direct and online channels evolve, agents are expected to move towards higher value activities that involve advice, sales and customer support for more complex products.

(ii) Availability of products through direct distribution channels

As part of the policy objective to promote diversification of distribution channels, the Bank issued the policy document on Direct Distribution Channels for Pure Protection Products in June 2017. Beginning 1 July 2017, insurers and takaful operators were required to offer pure protection term life insurance and family takaful products directly to consumers. The Bank is currently finalising the specifications for direct offerings of critical illness, and medical and health products to be issued in 2018.

The Bank conducts ongoing monitoring and reviews to ensure that the LIFE Framework is implemented smoothly. Thematic reviews on 22 life insurers and family takaful operators were conducted during the year to assess compliance with business conduct requirements and the industry's readiness to implement the BSC framework requirements as planned. Priority was accorded towards ensuring that the appropriate infrastructure is in place to support direct channels, such as simplified underwriting processes and self-directed purchasing guides. Reviews also focused on ensuring adequate measures are taken by life insurers and family takaful operators to prepare agents for the implementation of the BSC framework.

Perlindungan Tenang

In November 2017, the Bank together with the insurance and takaful industry launched *Perlindungan Tenang*. This is an initiative to introduce a range of insurance and takaful products to meet the needs of underserved Malaysians, particularly the Bottom 40% household segment (B40). The introduction of *Perlindungan Tenang* follows from long-held concerns that the majority of existing insurance and takaful products on the market are complex and unaffordable, and thus out of reach of many Malaysians. This is evidenced by the low life insurance and family takaful penetration rate in particular among the B40 income segment.

Products under the *Perlindungan Tenang* banner must be affordable, provide good value, be widely accessible, be easy to understand, and be easy to purchase and claim on. Products meeting these criteria will carry the *Perlindungan Tenang* mark for easy public recognition. The state of insurance and takaful uptake among the B40, and the Bank's vision on how their needs should be met through *Perlindungan Tenang* are elaborated on in the Box Article 'Expanding Insurance and Takaful Solutions for the Underserved Segment'.

As at end-2017, the industry has launched a total of 10 *Perlindungan Tenang* products – six life insurance products, three family takaful products and one general insurance product. These products can be purchased through various distribution channels, including insurer and bank branches, agents, internet, mobile network and selected cooperatives and societies. The list of available products and participating institutions are listed on the respective insurance and takaful associations' websites. Over 2,000 *Perlindungan Tenang* policies were sold within the first two months. Further traction is expected in 2018 with the planned launch of a national communications campaign to increase public awareness of *Perlindungan Tenang*.

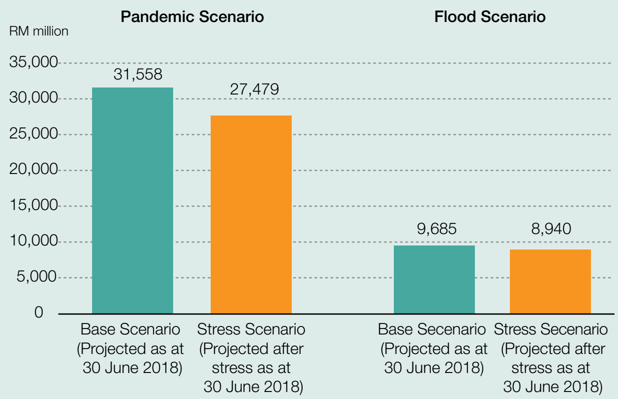
Stress testing of direct insurers and takaful operators

Pursuant to the policy document on Stress Testing issued in mid-2017, the Bank conducted the first insurance and takaful industry-wide stress test to assess resilience of direct insurers and takaful operators against severe but plausible insurance risk events assumed to take place over a one year time horizon. This included a pandemic event and a severe flood scenario.

The results affirm the industry's overall resilience against the tested scenarios. Post-stress, capital ratios will remain at comfortable levels above the regulatory minimum of 130% with surplus capital buffers at RM27.4 billion in the life and family sector and RM9.0 billion in the general sector (Chart 3.14). A significant portion of losses under the flood scenario will be absorbed by the insurers and takaful operators' reinsurance/retakaful arrangements. The Bank intends to repeat these tests annually, alongside regular industry consultations to further refine the scenarios and models.

Chart 3.14: Industry Surplus Capital Above Regulatory Minimum of 130% under Base and Stress Scenarios

Surplus capital buffers remained at comfortable levels under stress scenario



Note: For the purpose of this analysis, "surplus capital" is defined as total surplus capital for all funds within the company
Flood scenario results exclude composite insurers and takaful operators with small general businesses (<5% of total premiums/contributions)

Source: Bank Negara Malaysia

Insurance and Takaful Sector

Key Arising Changes from the MFRS 17

1. Measurement of liabilities	**Greater consistency with the introduction of a general measurement model** • Where requirements were previously broad and principles-based, allowing for a variety of valuation approaches, there is now a general measurement model. Simplifications and adjustments to the general measurement model are allowed only under specific circumstances (i.e. the premium allocation approach for short-term contracts and the variable fee approach for direct participating contracts). • The general measurement model aims to ensure that insurance contracts are measured using updated assumptions on cash flows, discount rates and risk, at each reporting date. There is also greater clarity on the cash flows that should be taken into account in measuring the liabilities (i.e. the boundary of the contract).
2. Profit recognition	**Profit recognition approach that better reflects provision of services and expectations on profitability** • Profits can no longer be recognised on day one, but must be systematically recognised over the coverage period of the contract. • Portfolios of contracts have to be further segregated in a way that limits the offsetting of profitable contracts against onerous ones, to provide a clearer picture of profitability trends.
3. Disclosure	**Greater clarity and transparency for users of financial statements** Key changes include: • Greater granularity in the presentation of performance, with the two drivers of profit, namely the insurance service results and the investment results from managing financial assets presented separately. • Alignment of revenue recognition with that of other industries, as revenue will be recognised in line with the expected coverage for the period, rather than when incurred. In line with the separate presentation of investment results from insurance service results, insurance revenue will no longer include the savings component of premiums. • Additional disclosures on the amounts reported, significant judgements made and risks arising from the contracts.

Accounting standards

The issuance of new IFRS 17 by the International Accounting Standards Board in May 2017 marked a fundamental change in the approach to recognition, measurement and presentation of insurance contracts in the financial statements of insurers and takaful operators. IFRS 17, which replaces IFRS 4, introduces more detailed specifications on how insurance contracts must be measured. This creates more consistency and allows better comparison of financial performance between the insurance, takaful and other sectors, as well as across jurisdictions. Following this development, the Malaysian Accounting Standards Board consequently approved the standard as Malaysian Financial Reporting Standards 17 (MFRS 17) for application in Malaysia, effective financial year beginning 1 January 2021.

Two key challenges lie in the uncertainty around the interpretation and implementation of the standards, and increased demands on systems and expert resources. Interpretive differences between insurers and takaful operators may arise in areas such as the definition of contract boundaries, the application of the variable fee approach, and the determination of discount rates and risk adjustments. The standards also introduce concepts that are new to the industry, such as the approach for profit recognition and the valuation of long-term general insurance/takaful contracts. The Bank will continue to engage the industry and professional associations to address these issues and where appropriate, determine consistent standards for adoption by the industry to promote comparability and alignment with prudential considerations.

Recognising the potential complexities in implementing MFRS 17, the Bank has required insurers and takaful operators to establish clear implementation plans to comply with the standard. Over the coming year, insurers and takaful operators are expected to gain a better grasp of the impact of implementation on their resources, systems and reported performance. In addition, the Bank will be carrying out a quantitative impact study in 2018, to provide more detailed insights on the regulatory, business and market implications of the new standards. Results from the study will also be used to inform the review of the Bank's existing valuation requirements.

The Bank will continue to engage the industry and professional associations to address concerns faced in the implementation of MFRS 17

Review of capital frameworks for insurers and takaful operators

During the year, the Bank initiated a review of the Risk-Based Capital Framework for Insurers (RBC) and the Risk-Based Capital Framework for Takaful Operators (RBCT) to ensure that the standards continue to remain fit for purpose. The review intends to reflect changes in the domestic insurance and takaful industry landscape, including how the range of insurance and takaful product offerings have evolved since the initial issuance of the standards in 2009 and 2014 respectively. It also aims to account for developments in global regulatory and accounting standards. These include the Risk-Based Global Insurance Capital Standard (ICS) by the International Association of Insurance Supervisors (IAIS) and new accounting standards on Insurance Contracts (MFRS 17) and Financial Instruments (MFRS 9). The review will be conducted in phases over the next few years starting from 2018. The first phase will focus on reviewing existing prudential limits on assets and counterparty exposures, with the aim of minimising the risks of pro-cyclical investment behaviour and further strengthen the prudent management of investment risks by insurers and takaful operators. This will be followed by the review of the standards for the valuation of liabilities and capital adequacy components.

Enhancement to sales illustrations for participating policies

New requirements on sales illustrations for participating life products were introduced by the Bank on 1 January 2017 to enhance how costs, benefits and risks are presented to consumers. An insurer must provide a summary page that explains the key elements of a product, in addition to a comparison against a term life plan to enable consumers to assess how well it meets their protection and savings needs. The objective is to better guide consumers towards making prudent decisions taking into account their individual circumstances and risk appetites. To ensure that sales illustrations are more focused on helping consumers understand potential variability in outcomes rather than create undue expectations on future investment returns, the rates used to project scenarios of future benefits have been standardised. These rates were lower than what was generally illustrated and resulted in the industry shifting away from participating business. This indicates that purchasing decisions remain disproportionately driven by expectations of future returns, which the Bank aims to address going forward. In addition, the Bank will continue to monitor the impact of these requirements to ensure that the requirements achieve their intended effect.

Business conduct supervision and enforcement activities

The Bank continued to accord high priority to improving the professional conduct of insurers, takaful operators and intermediaries. Supervisory activities carried out during the year were focused on proper advice and ethical selling practices. While improvements have been observed, particularly in the quality and investments in the training of intermediaries, there is further scope for achieving higher professional standards in the industry as outlined earlier in this chapter (refer to subsection on 'Implementation of Balanced Scorecard framework'). Observations of improper sales practices and unprofessional conduct were met with supervisory and enforcement actions (Diagram 3.1).

In 2018, the Bank will also be issuing standards to elevate the professional integrity and ethical behaviour of the insurance and takaful intermediaries. These standards will require shareholders of insurance and takaful brokers, and financial advisers to be persons of integrity and good reputation, and persons involved in providing advice to be suitably qualified. In improving the quality of motor claims management process, standards will also be issued to strengthen expectations on the provision of transparent and independent claims assessments by loss adjusters.

Diagram 3.1

Supervisory and Enforcement Actions in 2017

PRODUCT DISCLOSURE

Nine financial service providers (FSPs) were ordered to change their product disclosure of participating life insurance policies as previous sales illustrations were misleading and failed to meet the prescribed standards

9 FSPs

8 FSPs

SALES PRACTICES

Eight FSPs were required to put in more controls and monitoring to curb aggressive selling tactics and improper financial advice by reckless intermediaries

CONSUMER EXPERIENCE

Following the implementation of motor liberalisation, 10 FSPs were instructed to improve customer support services by improving staff training

10 FSPs

3 FSPs

SYSTEM LAPSES

Due to lapses in IT systems, three FSPs were directed to refund 114,743 affected policy owner/takaful participants with a total of RM27.4 million

COMPLAINTS HANDLING

15 FSPs were required to include references to the Ombudsman for Financial Services (OFS) in their final decision letter to customers

15 FSPs

Source: Bank Negara Malaysia

REGIONAL AND INTERNATIONAL COOPERATION

The Bank continued to participate actively in the development of international standards for insurance activities through its membership in the IAIS. In particular, the Bank is represented at the Policy Development and Implementation and Assessment committees, contributing in areas such as the ongoing enhancements to the Insurance Core Principles, in addition to the development of the ICS. This is important given the global nature of insurance activities and Malaysia's interests to expand domestic insurance market capacity to support the economy, while ensuring its resilience. The Bank hosted the IAIS Annual Conference 2017 and meetings in Sasana Kijang in November 2017. The discussions that took place delivered a pivotal agreement among IAIS members on a path to convergence of the ICS for internationally active insurance groups. The Kuala Lumpur agreement marked a significant step forward towards the ultimate goal of a single capital adequacy measure that achieves comparable outcomes across jurisdictions. The next iteration of the ICS (ICS 2.0) is expected to be released in 2019 for a five-year monitoring period. The Bank will continue to monitor developments on the ICS through the Bank's involvement in the IAIS committees, and the Capital, Solvency and Field Testing Working Group. The Bank also hosted the Roundtable Discussion on Takaful, on the side of the IAIS events where the Bank shared Malaysia's experience in developing the takaful sector.

On the regional front, the Bank and the Office of Insurance Commission of Thailand (OIC) signed a memorandum of understanding (MoU) to enhance cooperation for mutually beneficial insurance sector development in December 2017. The MoU encompasses arrangements in the areas of mutual assistance, information exchange, and cooperation in capacity building and technical assistance between the Bank and the OIC. The MoU further strengthens regional cross-border regulatory collaboration between ASEAN insurance regulators to support ongoing efforts to deepen regional insurance integration.

Progress also continued to be made towards finalising the ASEAN Insurance Integration Framework (AIIF) guiding principles and roadmap which will shape the parameters for the implementation of the AIIF. In relation to the ASEAN Framework Agreement on Services, several regulations were gazetted to effect Malaysia's commitment to liberalise the cross-border supply of marine, aviation and transit insurance and insurance broking services enshrined in the Seventh Package of Commitments. This is expected to facilitate intra-ASEAN trade and investment, in line with the vision of the ASEAN Economic Community.

Expanding Insurance and Takaful Solutions for the Underserved Segment

By Chiew Hui Lin

Introduction

This box article analyses the low uptake of insurance and takaful among underserved segments in Malaysia, focusing in particular on the bottom 40% households by income (B40). New directions for product design and delivery are proposed to improve insurance and takaful penetration within the B40 segment.

B40 are Under-Protected Relative to National Population

A breakdown of the Malaysian life insurance and family takaful penetration rate[1] (2017: 36.5%) reveals that the uptake of insurance and takaful among the B40 is disproportionately low relative to the national population (Diagram 1). Out of the working population, meaning those aged 20 to 59 years old who are most likely to be in employment and to have dependents, the B40 penetration rate[2] stood at 30.3% at end-2016, compared with the national working population penetration rate of 50.4% (2017). There is also a clear disparity between the B40 and non-B40 penetration rates across all states, where the gap is particularly wide in states with large urban centres. In urban areas such as Kuala Lumpur, 88% of non-B40 between ages of 20 and 59 have insurance and takaful coverage, compared to 30% among the B40. In the less urban states such as Sabah, a similar pattern is observed, with 30% of non-B40 having insurance and takaful relative to 19% among the B40.

The low penetration rate of insurance and takaful among the working-age B40 segment is a critical issue. B40 households are highly vulnerable to financial shocks as they often have low levels of savings. When a financial shock occurs, such as the death or illness of the family breadwinner, the household not only loses its source of income, but also lacks the funds to pay for the unexpected expense. In such situations, insurance and takaful can act as a safety net with insurance and takaful payouts providing temporary relief and enabling households to weather financial emergencies.

Reasons Impeding B40 Access to Insurance and Takaful

In last year's FSPSR box article 'Evolution of Life Insurance and Family Takaful Distribution Channels'[3], a few factors impeding the affordability and accessibility of insurance and takaful were identified. These include the low productivity and limited geographical reach of the agency network, in addition to the focus of bancassurance channels on products targeted at affluent customers. In this article, we examine two other developments that have further contributed to the low take-up of insurance and takaful products by the B40 segment.

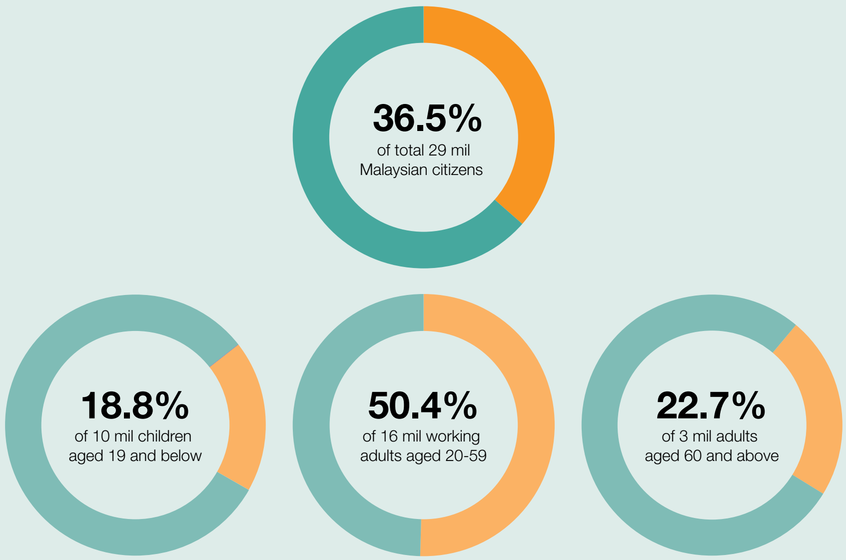
1) **Industry focus on products with savings and investment elements that are complex and unaffordable**
   The current dominance of insurance and takaful products with savings and investment elements, which are often costly and complex, has crowded out products that are more suited for the B40 segment. In its simplest form, an insurance or takaful product provides protection such that a guaranteed benefit is paid out on a specified event for a given amount of premium paid. However, over the years, products have evolved to increasingly include savings and investment elements. The inclusion of these benefits inevitably increases the base cost of such products. Products also become more complex due to features that introduce greater uncertainty into the product plan. An example of this is investment-linked (IL) products, which form 54% of insurers and takaful operators' new regular premiums or contributions today due to its inherent capital-efficiency. Under an IL product, premiums paid by the policy owner are channelled to a unit fund, from which deductions are made to fund the insurance protection element. The policyholder bears the entire investment risk while

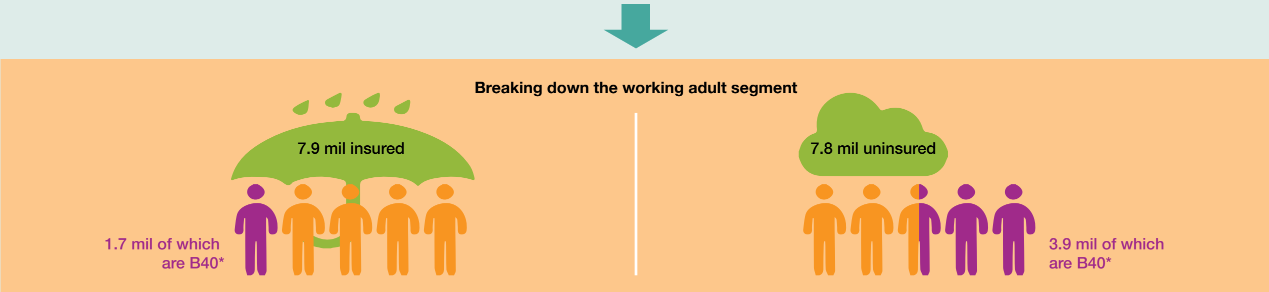
[1] Defined as the percentage of Malaysian citizens who own an individual life insurance policy or family takaful certificate, after eliminating duplicates from multiple policies.
[2] The Bantuan Rakyat 1Malaysia (BR1M) recipient segment is used as a proxy for the B40 segment.
[3] 'Evolution of Life Insurance and Family Takaful Distribution Channels', Financial Stability and Payment Systems Report 2016, Pages 79-83.

Diagram 1

B40 Life Insurance Uptake and Other Characteristics

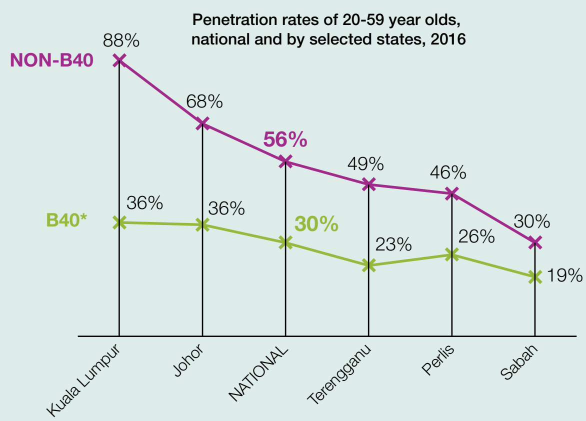
What percentage of Malaysian citizens own a life insurance or family takaful policy?





What do we know of the Bottom 40% household segment?

Consistently lower penetration rate than non-B40 segment



76% of B40* are working-age

Median income of RM3,000
Mean income of RM2,848

1.5 mil urban and 890,000 rural households earn <RM4,000

49.3% have home internet
95.2% have a mobile phone

*Estimated by using 2016 BR1M recipients as a proxy for the B40 segment

Source: Bank Negara Malaysia, Department of Statistics Malaysia, Implementation Coordination Unit (2017) insurers have full discretion to review insurance charges, which affects the amount of these deductions. While offering a degree of flexibility to policy owners to manage their protection levels and investment exposures, such products are usually designed for mass affluent segments and are generally not well understood by consumers from the lower-income groups. This ultimately reduces their suitability, affordability and accessibility to the B40 segment.

2) **Proliferation of products packaged with add-on benefits that may not provide meaningful protection**
In the pursuit of product differentiation to remain competitive, insurance and takaful benefits are increasingly offered as add-on benefits purchased with basic policies. For example, some personal accident products come with add-ons such as cover for flood-related injuries. This is a highly specific event, often involving lengthy claims documentation and verification processes before claims are paid. Products become more expensive and also more complex, without providing significant additional protection. The value of such benefits is questionable for B40 households, who would typically need such payments to be immediate in their hour of need due to the lack of savings. Based on a survey of 23 life insurers and family takaful operators conducted by the Bank in early 2017, only eight offered any life and family takaful products with monthly premiums below approximately RM15 per month, the level considered to be reasonably affordable for the B40 segment.

Perlindungan Tenang Initiative

The lack of insurance and takaful products for B40 households is a good example of market failure to provide protection for the underserved segment. Market failure necessitates an intervention by the regulator. Given these apparent market gaps and growing challenges associated with income distributional effects which further increase the vulnerability of B40 households, the Bank, on 24 November 2017, launched *Perlindungan Tenang* to expand insurance and takaful solutions targeted at the B40 segment. These products, which can be identified by a distinct logo (Diagram 2), are also intended to be suitable for the general public who are not currently covered by any form of insurance or takaful protection.

Diagram 2

Logo for *Perlindungan Tenang*

PERLINDUNGAN tenang MAMPU & MUDAH

Source: Bank Negara Malaysia

The initiative aims to galvanise a broader movement among insurers and takaful operators to offer products that meet five parameters: (1) affordable pricing; (2) provides good value; (3) widely accessible; (4) easy to understand; and (5) easy to purchase and claim. Through an iterative feedback process and close monitoring of take-up by the B40, the industry is expected to go beyond incremental enhancements to embrace new business models and processes that will support expanded product offerings for the underserved segments.

Such products will be evaluated against the following characteristics:

Affordable
Premiums should be set at an affordable level, which is defined as the amount that consumers are willing and able to spend on purchasing insurance or takaful protection. Premium levels must therefore take into account the circumstances of households in the target market, including disposable income, occupation, household size and

access to other coping mechanisms such as emergency savings or social safety nets. While such factors will vary substantially between individual households, the Bank is setting a target of monthly premiums not exceeding RM15. This target will be refined further as the industry gains more experience and understanding of the B40 households' expenditure patterns.

Good value

In order for products to offer good value to the B40 segment, they should cover risks that are most important for such households and maximise the proportion of the premium paid that is allocated to the protection benefits. As a measure of value, projected benefit payouts are generally expected to exceed at least half of premiums generated, with greater use of technology and alternative lower-cost access channels to minimise expenses and distribution costs. Agency channels, as currently structured, are unlikely to deliver affordable premiums at the level of value envisioned by the *Perlindungan Tenang* initiative. Innovation in distribution models is therefore imperative to optimise costs and outreach. This will require a longer view of investment decisions, including the potential for collective investments in supporting market infrastructure, in order to achieve a required critical mass.

Accessible

Coverage under *Perlindungan Tenang* products and distribution channels should be inclusive of the specific circumstances (such as location, occupation or dwelling types) that are typical of the B40 population. Products and services should be made available at access points that are convenient, such as public hospitals, urban and rural transformation centres (UTC/RTC), and smaller retail outlets. The smart use of technology should also be reflected in consideration of the specific needs and lifestyles of the targeted segments, rather than what is more familiar to the current market segments of insurers and takaful operators. For example, while internet distribution could offer cost savings and outreach beyond urban centres, only half of B40 homes are connected to the internet.

Easy to understand

Product benefits, terms and conditions should be designed to be self-explanatory to a consumer with relatively limited understanding of insurance and takaful. Insurers should minimise uncertainty in the product design, including those associated with underwriting disclosures, and the repudiation of or inadequate limits on claims. Marketing materials should present information in an intuitive manner to help consumers make informed choices, focusing on the protection they need and can afford.

Easy to buy and claim

The entire journey of a customer, from the first contact with the distribution channel to the point of claims payment, needs to be frictionless. Currently, a customer's experience is often riddled with many pain points. The process of making claims, in particular, including the supporting documents required, should be simplified to minimise anxieties at the point of making a claim. For example, while insurance or takaful offerings might be available online, claims need to be submitted at the branches of the insurer or takaful operator, often located at a considerable distance from the policyholder or beneficiary. In some incidences, a claim may require up to nine separate documents (for example, a claim for some death benefits). Hospital income benefits that reimburse the policyholder up to a month after being discharged from hospital do not meet the needs of a daily wage earner with low savings. To reduce these frictions, the Bank has required claims on *Perlindungan Tenang* products to be paid out within five working days from the receipt of complete, simplified documentation. Other improvements that are being prioritised to achieve a frictionless experience include:

- Nominations captured at the point of sale for more efficient claims payment;
- Simplified underwriting process and immediate policy issuance;
- Responsive and well-trained call centre staff for post-sale care; and
- Leveraging on open application interfaces (API) to further simplify the underwriting and claims process.

Early Signs of Innovation Among Providers of *Perlindungan Tenang* Products

As at end-2017, 10 *Perlindungan Tenang* products have been rolled out by 10 participating companies comprising six life insurers, three family takaful operators and one general insurer. More are expected to participate in 2018. Innovations that address some of the common pain points have included:

- Basic life and family takaful products focusing only on death benefits that come with simple disclosure and claims processes. One product allows electronic submission of claims documents through mobile applications such as WhatsApp.
- A fire product that relies on confirmation from the village head or district officer as substitute proof of residence for policyholders (staying in longhouses) that are unable to provide customary documentation.
- Acceptance of postal submissions of claims documents certified by the village head, school principal or police officer in lieu of in-person submission at the insurer or takaful operator's branch.
- A funeral benefit product with a 24-hour pay out timeline. Key features of this simple product fit on a brochure that is the size of a name card. Burial permits are accepted as an alternative to the death certificate, thereby removing uncertainties in the timing of claims payouts where a death certificate is required.

Conclusion

The Bank expects that further product innovations and improvements in delivery inspired by the *Perlindungan Tenang* initiative will increase overall insurance and takaful penetration, particularly among the B40 segment, as more experience is gained in meeting the needs in this segment. On its part, the Bank will continue to engage the industry on developing fit-for-purpose regulations, and intensify collaborations with the industry and other stakeholders to raise the financial capability of B40 consumers. More broadly, the efforts under *Perlindungan Tenang* to expand insurance and takaful coverage for those currently without protection, are also expected to generate positive spillovers for the insurance and takaful market as whole — through a renewed focus on improving customer value, access and experience.

Islamic Finance Development

Islamic Finance Development

ISLAMIC BANKING

Performance of the Islamic banking sector

Shariah-compliant financial solutions offered by the Islamic banking industry (including by development financial institutions), continued to support the diverse needs of the economy in 2017. Islamic financing grew by 9.4% to RM605.5 billion (2016: 11.8%) during the year (Chart 4.1), amid a moderate growth of 1.3% in conventional loans (2016: 2.4%).

Islamic financing of businesses sustained its positive growth of 7.8% (2016: 12.2%) and was channelled mainly to the finance, insurance and business services and manufacturing sectors. Business financing was driven by small and medium enterprises (SMEs), which grew by 12.5% (2016: 13.3%), amid the more moderate growth in conventional lending to SMEs (3.1%). Islamic home financing also continued to exhibit strong growth of 17.5% (2016: 16.3%, conventional loans 6.0%), reflecting the growing acceptance of Shariah-compliant home financing solutions.

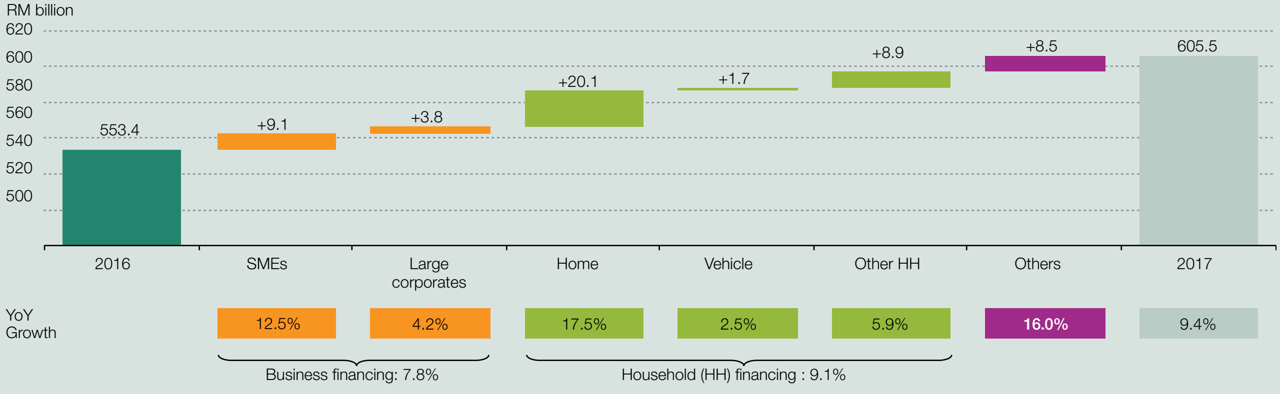
During the year, Islamic deposits and investment accounts expanded by 11.7% (2016: 9.4%) to RM672.6 billion. Of this, investment accounts increased by 6.9%, amounting to RM78.7 billion, reflecting a growing recognition of investment accounts by customers as an alternative investment instrument and further diversification of funding sources by Islamic banks.

Islamic banks remained on a strong financial footing. The industry's common equity tier 1 (CET1), tier 1 and total capital ratios of 13.2%, 13.7% and 17.6% respectively (2016: 13.0%, 13.0% and 16.6%), were well above the minimum regulatory requirements. Asset quality remained sound with a net impaired financing ratio of 0.9% (2016: 1.0%). Sufficient liquidity buffers were maintained, with the industry reporting a liquidity coverage ratio of 149.2% (2016: 124.9%).

In 2017, Islamic banks recorded higher pre-tax profits of RM6.7 billion (2016: RM5.6 billion). This was driven mainly by an increase in net financing income derived from term financing for the purchase of properties. Returns on assets and equity were stable at 1.1% and 14.3% (2016: 1% and 13.1%) respectively.

Chart 4.1: Growth of Islamic Financing

Positive growth of Islamic financing driven by household sector



Source: Bank Negara Malaysia

Development of the Islamic banking sector

Creating an impact on society and economy through value-based intermediation (VBI)

The Islamic banking industry in Malaysia has advanced significantly over the years. From a market share of 5.3% in 2000, Islamic financing now accounts for 34.9% of total loans and financing. Islamic banks also offer a wide range of competitive and innovative products, complementing solutions offered by conventional banks.

VBI aims to achieve the intended outcomes of Shariah in promoting good and preventing harm

While the growing depth and breadth of Islamic finance is an important barometer of progress, equally important is ensuring that Islamic finance delivers a positive and sustainable impact on the community, economy and environment. This vision is being realised through the adoption of VBI by Islamic banks, which reinforces the intent of Shariah to promote good and prevent harm (Diagram 4.1).

VBI is being advanced to bring about a transformation in the business models and day-to-day conduct of Islamic banks. This was captured in a strategy paper that was developed in collaboration with the industry and issued by the Bank in July 2017. The vision under VBI is for Islamic banks to be more impact-driven in the design and offering of products, and in their dealings with customers. Important areas of focus include enhanced assessments of a customer's application for financing, where the traditional credit assessment methodology would be supplemented with an assessment of the positive impact of the financing to the community and the economy. For business financing in particular, such an assessment will be based on a wider set of considerations which may include the potential for the financing to contribute towards generating sustainable employment opportunities and entrepreneurship.

The expectation is for such an impact-driven mindset to be embedded within and well-integrated into the risk management practices and product development strategies of Islamic banks. By being more customer-driven, Islamic banks are expected to be more responsive to the unique circumstances of individual customers through the offering of solutions that address their differentiated needs. For example, the practice of complementing financing with financial capability advice is expected to be more prevalent within the Islamic banking industry going forward. Islamic banks, in collaboration with other relevant industry experts, are also expected to offer business and technical skills training to help young and new entrepreneurs better commercialise their ideas. Another approach being considered is to directly link the incentive structures of Islamic banks, not just with the volume and value of financing disbursed, but also with the ability of customers to service the financing over a long horizon. This is expected to lead to Islamic banks and their employees taking a longer-view of the financial well-being and commercial success of their customers.

The implementation of VBI by Islamic banks is industry-driven, factoring in the different levels of readiness and capacity of individual Islamic banks to initiate and sustain the adoption of new business models and internal practices that are consistent

Diagram 4.1

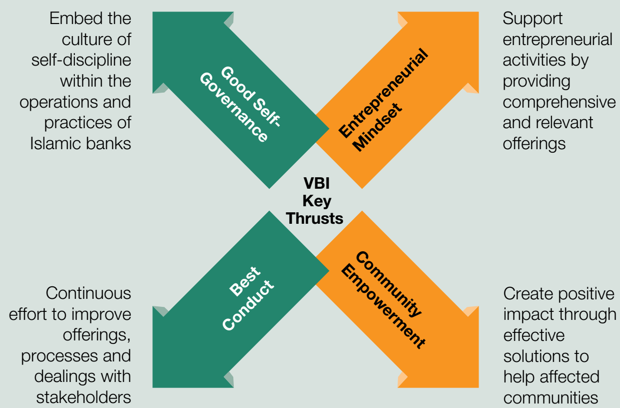
Overview of VBI

What is VBI?

An intermediation function that aims to deliver the intended outcomes of Shariah through practices, conduct and offerings that generate positive and sustainable impact to the economy, community and environment.

VBI shares its purpose with other movements and initiatives in the world of business and finance to deliver economic, social and environmental benefits for wider stakeholders.

However, a number of characteristics set VBI apart:
1. Underpinned by Shariah;
2. Embedded in and integrated with the business model, consistent with long-term shareholder value creation; and
3. Reflected in day-to-day practices and conduct, going beyond philanthropy and employee volunteerism.



Source: Bank Negara Malaysia

with VBI. To support changes by the industry, a Community of Practitioners (CoP) comprising nine Islamic banks was established to spearhead VBI implementation. The CoP serves as an effective platform for members to share knowledge and pursue collective efforts to develop and execute VBI strategies in collaboration with strategic partners beyond the financial fraternity.

The CoP also aims to leverage its connections with established value-based institutions, such as the Global Alliance for Banking on Values and Triodos Bank, to advance the understanding and practice of VBI among Islamic banks in Malaysia. Observations of successful VBI models indicate that they have a number of features in common: leadership-driven strategies and values that are aligned from the top, an enterprise-wide culture that is consistently demonstrated in business plans and operations, and a system that encourages constructive engagements with and accountability to broader stakeholders.

As the VBI initiative progresses to its implementation phase, the immediate focus in 2018 will be on developing tools for operationalisation and performance measurement. Guidance on applications and approaches to VBI will be developed to help Islamic banks navigate implementation challenges associated with different business models and maturity of individual Islamic bank's operations. In addition, a scorecard will be introduced to measure both financial and non-financial progress of Islamic banks towards VBI adoption. This is expected to yield changes in the financing portfolios of Islamic banks, with at least half of new business and personal financing channelled to purposes that are consistent with VBI by 2020. Going forward, further targets will be set upon implementation of the scorecard.

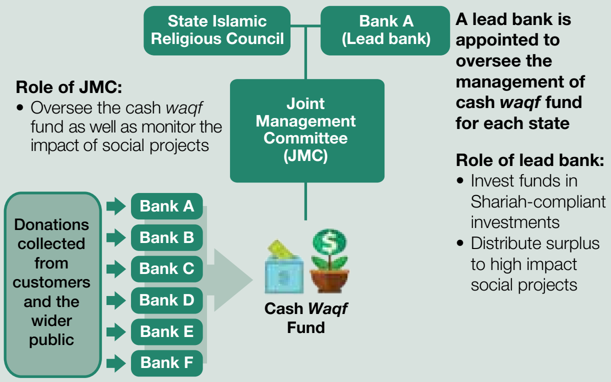
While the industry is still at early stages in its journey towards VBI, there are already concrete examples of VBI being put into action today. For instance, funds raised through investment accounts are being channelled to a variety of purposes, including to provide risk capital for entrepreneurs, such as SMEs. During the year, efforts were directed at aligning and strengthening industry practices to ensure that investment accounts function truly as 'risk capital' instruments. The Bank issued regulatory guidance on the accounting treatment for restricted investment accounts to ensure that cash flows are managed in a way that allows such accounts to be treated off-balance sheet. Focus was also directed at improving product disclosures, strengthening the competency of frontliners in marketing investment accounts and ensuring effective customer suitability assessments.

The Investment Account Platform (IAP) – which commenced operations in 2016 – is gradually emerging as an important enabling infrastructure to mobilise and channel investment accounts towards funding entrepreneurial ventures. In 2017, funds raised through IAP listings quadrupled to RM95.3 million (2016: RM20.0 million) from four ventures. To provide a more convenient, seamless and efficient experience for new investors, the industry embarked on the development of a multilateral framework for customer on-boarding. Under this framework, IAP banks will mutually recognise each other's customer due diligence practices, thus removing the need for a customer to visit the branch of IAP sponsoring banks to open a new bank account. The framework is expected to be finalised and operational by the first half of 2018.

Another concrete example of VBI in action is the empowerment of local communities, both Muslims and non-Muslims, seen through the growing involvement of Islamic banks in social finance. In September 2017, six Islamic banks entered into a collaboration agreement to develop cash *waqf* (endowment) funds with the State Islamic Religious Councils (SIRCs). Under this initiative, participating Islamic banks will partner with SIRCs of 10 states to modernise the collection of cash *waqf* through their access points, and internet and mobile banking services. Funds collected will be invested in Shariah-compliant instruments. Returns generated from these investments will in turn be channelled to fund projects that promote economic empowerment, education and health (Diagram 4.2). As part of this agreement, Islamic

Diagram 4.2

Cash *Waqf* Fund



Source: Bank Negara Malaysia

Islamic Finance Development

banks have also committed to the development of knowledge and expertise in managing the investment and distribution of *waqf* funds. As part of this commitment, the Association of Islamic Banking Institutions Malaysia will develop a Code of Governance and Transparency for the management of *waqf* funds in 2018 to set benchmark standards for industry practice.

Strengthening institutional capabilities of Islamic banking subsidiaries

Islamic banking subsidiaries play an important role in the Islamic banking sector. The 11 subsidiaries account for 65.7% of the industry's assets and as members of large financial groups, are able to leverage on their groups' shared services functions, such as branch networks, technological platforms and human resources. This flexibility has helped expedite the growth of Islamic finance, allowing for efficient deployment of resources and wider access to banking services for customers.

Islamic banking subsidiaries however remain fully accountable for ensuring that these operational flexibilities do not compromise the Shariah compliance of business practices and product offerings. A development of some concern has been resource sharing practices that are driven solely by operational and cost efficiency considerations, accompanied by under-investments in internal capacity within Islamic banking subsidiaries. This has resulted in higher incidences of Shariah non-compliance and mis-selling of Islamic financial products.

To encourage more optimal outcomes from resource sharing management, the Bank engaged with the senior management of Islamic banking subsidiaries and their respective financial groups during the year to draw commitment from the industry to take specific actions to improve current practices (Diagram 4.3).

Diagram 4.3

Commitments to Enhance Resource Sharing Practices of Islamic Banking Subsidiaries

- Set clear vision, policy and strategy for the Islamic banking business
- Commit to undertaking capacity building initiatives to facilitate future growth
- Provide commitment to focus on Islamic banking business
- Enhance service level agreements to improve shared services functions

Source: Bank Negara Malaysia

These include commitments to support specific strategies for the Islamic banking business and to increase investments to develop capacity within Islamic subsidiaries. The industry is expected to reflect these commitments in the annual business plan and group-level service agreements starting from 2018.

TAKAFUL

Performance of the takaful sector

Sustained domestic demand for Shariah-compliant protection continued to support takaful growth in 2017. The combined net contributions of family and general takaful business increased by 9.5% to RM8.3 billion (2016: 10.5%), while the market share of the takaful industry, in terms of net premiums and contributions, rose to 15.2% (2016: 14.6%).

In family takaful, new business expanded by 10.0% (2016: 8.6%), largely attributable to mortgage term, investment-linked and medical products which accounted for 76.1% of total new business. A number of new and innovative family takaful products were launched during the year. These include three takaful products under *Perlindungan Tenang* (refer to box article on 'Expanding Insurance and Takaful Solutions for the Underserved Segment') which are affordable and designed to support simpler sales and claims processes. In the general takaful sector, business grew by 6.4% (2016: 4.7%), with the motor, fire and personal accident segments commanding 91.3% of total gross contributions.

Takaful and retakaful operators remained well capitalised, with an aggregate capital adequacy ratio of 209.4% (2016: 205.3%) and capital buffers totalling RM4.0 billion. Takaful risks remained largely unchanged, reflecting a stable business mix and healthy reserve level to meet takaful liabilities. Total takaful fund assets increased by 9.4% (2016: 8.4%) to reach RM29.3 billion, with corporate sukuk, cash and deposits accounting for 69.1% of total takaful fund assets. Profitability of the takaful sector was mixed in 2017. Family takaful recorded higher profits of RM2.6 billion, up 27.2% from 2016 (RM2.0 billion) mainly driven by better investment results. The general takaful sector however recorded weaker profits of RM0.3 billion, down 28.3% from the previous year (RM0.4 billion) on account of higher management expenses and claims payout.

Development of the takaful sector

Developing a conducive ecosystem for innovation and growth

A key focus in developing the takaful sector in 2017 was the positioning of products and services to better meet the protection needs of businesses. In support of Malaysia's aspiration to become a global halal hub, the Bank aims to publish an exposure draft outlining a clear and facilitative regulatory framework for the offering of trade credit takaful in the first half of 2018. This is also in response to the large and growing halal market, estimated at USD2.0 trillion in 2016[1]. As a Shariah-compliant product which complements trade credit insurance, trade credit takaful can help protect businesses from the risk of defaults in international trade, allowing them to further grow their export business. Islamic banks may also use the product as a tool to mitigate credit risk and increase their trade financing capacity.

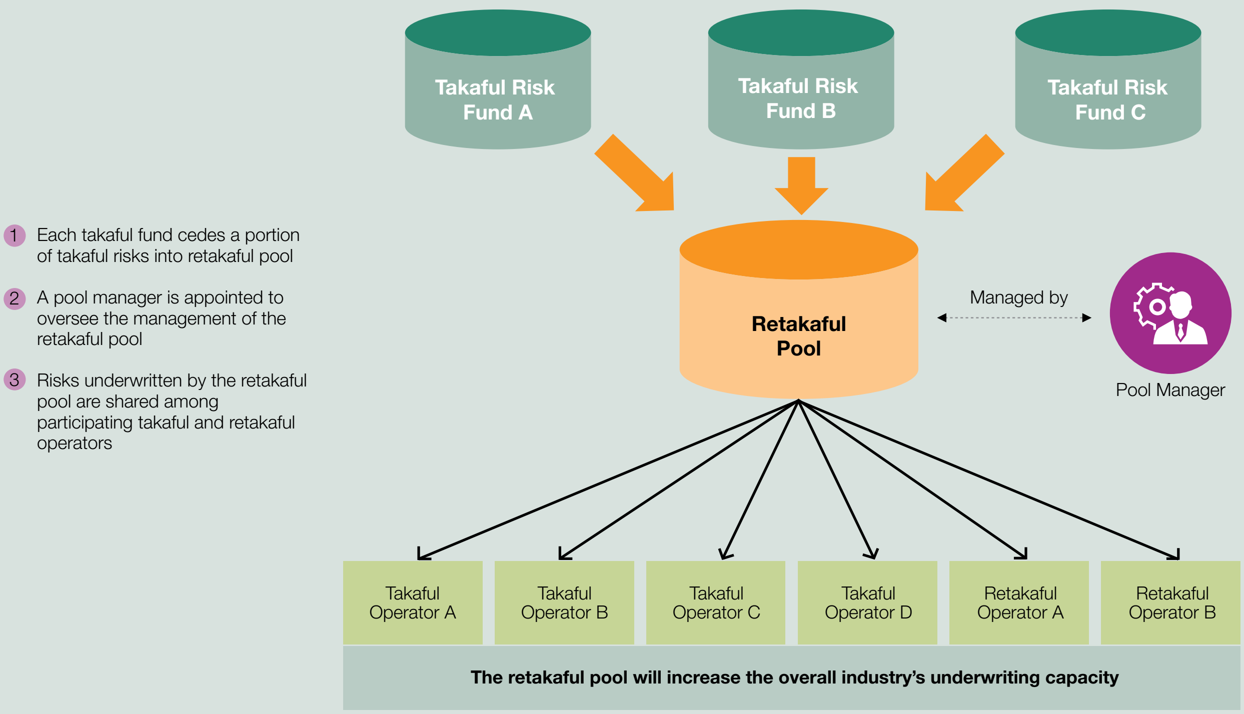
As part of efforts to expedite the process for claiming death benefits, the Bank, in collaboration with the Malaysian Takaful Association (MTA), successfully obtained agreement from the National Registration Department (NRD) to develop an automated mechanism that will allow takaful operators to regularly check the status of policy owners against the national death registry. By leveraging on the NRD's existing infrastructure, requirements for documentation and procedures for verifying claims will also be simplified, thereby expediting the payment of death benefits. This initiative is expected to be operationalised in 2018.

The claiming of death benefits will be made simpler and faster with a new automated mechanism

In the area of retakaful, efforts were directed at developing an industry-wide retakaful pool to expand the underwriting capacity of the general takaful industry, while reducing reliance on conventional reinsurance capacity to support the takaful sector.

Diagram 4.4

Mechanism for Retakaful Pool



Note: The number of participating takaful and retakaful operators is for illustrative purpose only

Source: Bank Negara Malaysia

[1] Source: State of Global Islamic Economy 2017-2018 Report,Thomson Reuters.

The initiative, led by the MTA, enables individual takaful and retakaful operators to combine their capacity to underwrite larger and more complex risks that would otherwise be beyond the risk appetites of individual operators (Diagram 4.4). The enlarged underwriting capacity is expected to result in a reduction in the share of general takaful gross contributions ceded to the conventional reinsurance market, which currently stands at 9.2% (RM236.2 million).

Amendments to the Income Tax Act 1967 were made during the year to allow for the deductions of expenses incurred in managing family takaful funds. The amendment recognises the unique features of the takaful business model and accords regulatory parity in the tax treatment between the takaful and insurance industries.

REGULATORY AND SUPERVISORY FRAMEWORK

The Bank's regulatory priorities in the area of Islamic finance in 2017 continued to be centred on measures to promote end-to-end Shariah compliance and spur greater product innovation in meeting the needs of the economy and society.

Ensuring end-to-end Shariah compliance through Shariah standards

Since 2013, the Bank has worked closely with the Shariah Advisory Council of Bank Negara Malaysia (SAC) to progressively roll out a compendium of Shariah Standards and Operational Requirements. These Shariah standards aim to reinforce the principles of Shariah, while ensuring consistent and effective governance in the application of various Shariah contracts. During the year, standards on *wa`d* (promise) and *kafalah* (guarantee) were finalised, bringing the number of total standards issued to date to 12. In addition, exposure drafts on two new standards, namely *rahn* (pledge) and *bai` al-sarf* (exchange of money), were also published for industry consultation, with the view to finalise the standards in 2018 (Table 4.1 outlines the salient features of these four standards). The completion of the compendium of standards will not only strengthen Shariah compliance and governance, but also enhance public confidence in Islamic financial transactions and encourage a broader range of product offerings to meet the diverse needs of customers.

To encourage greater innovation in takaful product offerings, the Bank conducted a review of the Takaful Operational Framework. The review seeks to provide further clarity on the operationalisation of Shariah contracts – namely *wakalah* (agency), *mudarabah* (profit-sharing), *qard* (interest-free loan), *hibah* (gift) and *tabarru`* (donation) – in the context of takaful business. This includes providing additional guidance on differentiated product features according to the attributes of the contracts. For example, proposed revisions will include a clear demarcation between takaful funds established for the purpose of savings and investment to reflect the relevant contracts applicable for each fund. The review will also clarify expectations on specific responsibilities of takaful operators under these contracts and how they should be remunerated. Greater clarity that is envisaged to follow from the revisions is expected to catalyse the development of products that better meet the protection needs of a wider range of customers. Internal controls over the establishment of sub-funds will also be strengthened to ensure their sustainability and safeguard the interests of takaful participants. The proposed revisions will be issued for industry consultation in early 2018.

Table 4.1

Shariah Standards Issued in 2017

Shariah Contract	***Kafalah*** **(Guarantee)**	***Wa`d*** **(Promise)**	***Rahn*** **(Pledge)**	***Bai` al-Sarf*** **(Exchange of money)**
Application	Guarantees, standby letters of credit and other forms of guarantees	All types of financing and derivatives	Pawnbroking and secured financing	*Foreign currency deposits, financing or investment*, remittance and bureau de change
Key elements	Ensures clear distinction between the rights and obligations of guarantors and beneficiaries	Specifies elements of a binding *wa`d* and sets out the rights and responsibilities of promisors and promisees	Defines accepted uses of collateral and allowable charges	Clarifies the approach to spot settlement and rate of exchange for currency exchange

Source: Bank Negara Malaysia

Strengthening impact of Shariah governance

The Shariah Governance Framework, first issued in 2010, sets out requirements to ensure that Islamic financial institutions are governed in a way that adheres to Shariah principles at all times. To further strengthen its effectiveness given the growing size, nature and sophistication of the business of Islamic finance, a number of enhancements to the framework were proposed in an exposure draft issued in November 2017. The exposure draft promotes Shariah governance practices that are more effectively integrated within the business and risk processes of Islamic financial institutions. It calls for, among others, the strengthening of responsibilities of the board of directors to include matters concerning Shariah governance, while reinforcing the independence of the Shariah committee in its advisory and decision-making role. The exposure draft further proposes to mandate that each Shariah committee include at least one industry practitioner to allow for practical and commercial dimensions of Shariah issues to be more thoroughly deliberated. Taken together, these proposals aim to elevate the role of Shariah committees in providing sound and innovation-centred Shariah advice to the board and senior management. The finalised policy document is expected to be issued in 2018.

The revised Shariah Governance Framework aims to ensure effective integration of Shariah governance within the business and risk processes of Islamic financial institutions

TALENT DEVELOPMENT

Islamic banks and takaful operators employed 21,398 individuals (2016: 21,601) or 13.0% of total banking, insurance and takaful employees in 2017 (2016: 13.1%). During the year, the sector hired 4,562 new employees (2016: 3,605) and created 787 new jobs (2016: 878). Recognising the importance of talent, the Bank and the industry continued to drive various human capital development initiatives to raise the quality of talent in the Islamic finance industry.

The Islamic finance talent development landscape in Malaysia offers a wide and comprehensive range of solutions, spanning higher education, research, training and consultancy services, which are globally-recognised. In meeting the global demand for Islamic finance talent, not just of today but into the future, efforts continue to be scaled up to further strengthen the talent development ecosystem in Malaysia – anchored mainly by the International Centre for Education in Islamic Finance (INCEIF), International Shariah Research Academy (ISRA), IBFIM[2], Chartered Institute of Islamic Finance Professionals (CIIF) and Association of Shariah Advisors in Islamic Finance Malaysia (ASAS). Over the years, these institutions have contributed towards enlarging the pool of Islamic finance professionals and deepening expertise through various programmes and initiatives (Diagram 4.5).

Following the work of the Steering Committee for Transformation of the Islamic Finance Education Landscape (an industry-led task force established in November 2016 with members drawn from senior management and board members from financial institutions and academia), the Bank introduced a number of reforms which were anchored on two key thrusts to meet the talent needs of the industry.

The first thrust was to enhance the quality of talent development offerings, not just to increase their technical rigour, but to also ensure industry relevance and a high level of professionalism. This aimed to support the creation of a high-calibre talent pool to drive and sustain the industry's future growth and development. Moving in this direction, INCEIF piloted an action-based learning (ABL) approach in its modules during the year as a precursor to its full adoption in the Master of Science in Islamic Finance programme in January 2018. Under the ABL approach, case studies and simulations will feature more prominently in the classroom. Students will also be assigned field projects and assignments with partnering organisations, where they will work on real-world issues and challenges, thus equipping students with greater applied knowledge and practical skills such as critical thinking, problem solving and effective communication skills. To date, INCEIF has secured the commitment of 22 commercial, non-profit and public sector institutions as ABL-partner organisations.

In addition to industry-relevant content, equally important were efforts to elevate the level of professionalism within the industry. To meet the professional development needs of the Shariah fraternity, ASAS launched the Certified Shariah Advisor (CSA) and the Certified Shariah Practitioner (CSP) qualifications in November 2017. These were the first comprehensive professional qualifications developed for Shariah professionals working in the Islamic

[2] IBFIM was previously known as 'Islamic Banking and Finance Institute Malaysia'.

Diagram 4.5

Contributions of Islamic Finance Talent Institutions

Established in 2006

INCEIF

International Centre for Education in Islamic Finance

INDUSTRY IMPACT

Sustainable supply of Islamic finance talent
- *1,585 graduates from 72 countries*

Top contributor for Islamic finance research
- *400 research papers and publications (more than 50% listed in Scopus/SCI[1])*

Industry-relevant content
- *Adoption of action-based learning methodology to expose students to leading industry practitioners*

THOUGHT LEADERSHIP

Extensive participation by faculty in industry
- *75% of faculty sit in various boards and advisory roles*

Reference point for other universities
- *49 textbooks produced, of which seven adopted by 23 universities*

REPUTATION

Local and global recognition of academic excellence
- *46th in Asia in RePEc[2] ranking*
- *Rated 5 (Excellent) in the Emerging University category by SETARA[3]*

Established in 2008

ISRA

International Shariah Research Academy

INDUSTRY IMPACT

Top contributor for Islamic finance research
- *Over 200 research projects with more than 90 papers published*

Global repository for Shariah knowledge
- *Over 2,000 fatwas and 500 articles in i-Fikr portal*

Close linkage between industry and academia
- *Content developer for Educator's Manual on Shariah Standards issued by the Bank*

THOUGHT LEADERSHIP

Extensive dissemination of research output
- *Over 300 conference presentations worldwide*

Reference point by other universities
- *ISRA textbooks used by over 70 universities*

Promotion of global harmonisation of Shariah standards
- *Joint research with Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI) to encourage harmonisation of Shariah standards globally*

REPUTATION

Global recognition for intellectual contributions
- *Winner of Islamic Economic Award in the Islamic Economic Knowledge Infrastructure category*

Established in 2001

IBFIM

Industry-led training institute in Islamic finance

INDUSTRY IMPACT

Upskilling of the Islamic finance workforce
- *More than 100,000 certification holders*
- *Over 1,700 training programmes, events and seminars*

Active publication
- *96 IBFIM publications*

Close linkage between industry and academia
- *Academic collaboration with 27 universities and colleges*

Established in 2011

Association of Shariah Advisors in Islamic Finance Malaysia

INDUSTRY IMPACT

Elevating the professionalism of Shariah advisors
- *Over 300 members*

Continuous professional development
- *Over 20 training programmes, events and conferences*

Professional qualifications for Shariah personnels
- *Cerfified Shariah Advisor (CSA) and Certified Shariah Practitioner (CSP)*

Established in 2015

Chartered Institute of Islamic Finance Professionals

INDUSTRY IMPACT

Elevating the professionalism of Islamic finance practitioners
- *Over 800 members*

Professional qualifications for Islamic finance
- *Chartered Professional in Islamic Finance (CPIF) (to be introduced in 2018)*

[1] Scopus is the largest abstract and citation database of peer-reviewed literature while SCI (Science Citation Index) is a citation index produced by the Institute for Scientific Information. Indexed journals are considered to be of higher scientific quality as compared to non-indexed journals
[2] RePEc is a central index of economics research, including working papers and journal articles
[3] Malaysia Rating for University and University College Excellence by Ministry of Higher Education

Source: International Centre for Education in Islamic Finance (INCEIF), International Shariah Research Academy (ISRA), IBFIM, Association of Shariah Advisors in Islamic Finance Malaysia (ASAS), Chartered Institute of Islamic Finance Professionals (CIIF) financial industry. The CSA is intended for practitioners with Shariah degrees while the CSP is designed for Shariah practitioners without formal Shariah qualifications. Going forward, these qualifications will be made a prerequisite for Shariah committee members and key Shariah personnel in Islamic financial institutions, including Islamic windows.

For non-Shariah practitioners, the Chartered Professional in Islamic Finance (CPIF) qualification by CIIF, was announced in December 2017 to raise the bar for professionalism and ethics in the Islamic finance industry. The CPIF offers two specialist tracks, namely Islamic banking and takaful, building on common foundational modules. Enrollment is targeted to commence in the first half of 2018 (Diagram 4.6).

The CSA, CSP and CPIF will elevate the level of professionalism in the Islamic finance industry

The second thrust of talent reforms pursued by the Bank was to improve coordination and cooperation among the five talent institutions. This was to ensure a coherent and optimal approach to talent development to meet the industry's current and future talent needs. A Strategic Coordination Committee, comprising representatives from the Bank and heads of the five entities, was established to develop strategies to raise the quality and range of talent offerings available to meet the needs of the Islamic financial sector. The Committee will address gaps and overlaps in offerings and maximise operating and financial synergies across the entities. Niche areas for individual institutions will be identified to leverage and further amplify the unique strengths of each institution.

In addition to specific enhancements to individual talent institutions, a number of other initiatives were also pursued during the year to enhance the suite of talent offerings. At the board level, a specialised Islamic finance training programme for directors of financial institutions will be launched in the first half of 2018. Building on the core foundations on corporate governance set out in the Financial Institutions Directors' Education programme, this new programme aims to equip directors with an appreciation and knowledge of Islamic finance value propositions by incorporating practical perspectives of Shariah governance, business opportunities in Islamic finance and the risks pertinent to Islamic financial transactions in the programme.

Diagram 4.6

Islamic Finance Professional Qualifications

Background

CSP	CSA	CPIF
Shariah personnel without Shariah degrees	Shariah personnel with Shariah degrees	Other Islamic finance practitioners
To produce Shariah advisors and officers with comprehensive and applied knowledge in Shariah, legal and finance practice		To produce versatile Islamic banking and takaful professionals with ability to assume wide-ranging responsibilities

Learning outcomes of each programme level

CSP

Level 3
Application of skills and knowledge in practical scenarios

Level 2
Knowledge in Islamic finance business practices with exposure to research methodologies in Shariah

Level 1
Foundations in Shariah and/or law and finance

CSA

Level 3
Application of skills and knowledge in practical scenarios

Level 2
Knowledge in Islamic finance business practices with extensive exposure to classical texts in Shariah

Level 1
Foundations in law and finance

CPIF

Level 4
Management level competencies in Islamic finance practices and operations

Level 3
Core competencies in specific areas of practice i.e. banking or takaful

Level 2
Knowledge in accounting and ethics, as well as an introduction to either banking or takaful operations

Level 1
Basic understanding of the operating environment, Shariah, economics, legal and products

Source: Association of Shariah Advisors in Islamic Finance Malaysia (ASAS), Chartered Institute of Islamic Finance Professionals (CIIF)

The Bank also continued to focus efforts on embedding Shariah standards within the Islamic finance education curriculum. In this regard, the Bank continued the development of the Educator's Manual for two more Shariah contracts, namely *musharakah* (profit and loss sharing) and *tawarruq* (asset purchase on a deferred basis with subsequent sale to third party for cash), adding to the first manual on *murabahah* (cost plus profit) released in 2016. These manuals are expected to be issued in the first half of 2018. The series of manuals aim to expose students of higher learning institutions to the practical workings of Shariah contracts by expounding the theoretical foundations currently set out in the core curriculum. Two universities have already embedded the Educator's Manual within their academic syllabus. As a next step, a Train-the-Trainers programme will be conducted by IBFIM to equip faculty with the requisite foundations for delivering the content to students. The Bank is also pursuing efforts to expand the adoption of these manuals to a larger number of universities in and outside Malaysia.

REGIONAL AND INTERNATIONAL INTERLINKAGES

Malaysia remained a leading global hub for Islamic finance in 2017. It is home to the world's third largest Islamic finance market by assets and the largest sukuk market with a 51.0% share of global sukuk outstanding, amounting to USD202.2 billion. In terms of product innovation, a significant milestone for the Malaysian sukuk market was achieved during the year with the world's first two green sukuk issuances amounting to RM1.25 billion for funding solar energy projects. The green sukuk were issued under the Sustainable Responsible Investment Sukuk Framework developed collaboratively by the Bank, the Securities Commission Malaysia and the World Bank to provide a facilitative fundraising ecosystem to meet the needs for green and other sustainability projects. Malaysia was ranked first in the Islamic Finance Development Indicator by Thomson Reuters and the Islamic Corporation for the Development of the Private Sector (a member of the Islamic Development Bank Group) in their Islamic Finance Development Report 2017. This was in recognition of Malaysia's achievements in the development of effective market infrastructure, diverse players, a deep Islamic finance talent pool and robust legal, regulatory and Shariah frameworks conducive for the sector's growth and development.

At the global level, the Bank continues to be an active advocate for the development of Islamic finance, particularly in the area of Shariah. Through its SAC, the Bank supports efforts to promote harmonisation and mutual respect of Shariah opinions expressed across Islamic financial systems. The SAC, which celebrated its 20th anniversary in 2017, has played an important part in the development of Islamic finance in Malaysia (Diagram 4.7). The SAC has produced several path-breaking Shariah rulings which have

Diagram 4.7

Key Contributions and Decisions by the SAC towards Developing the Islamic Finance Industry

Public confidence

Endorsement by renowned *fiqh* scholars that Islamic financial products are fully Shariah-compliant

- Permissibility of sale and buy-back arrangement with specified conditions and parameters
- Permissibility of takaful model based on *wakalah* (agency) contract

Legal certainty

Important source of reference for courts and arbitrators, while reducing risk of commercial disputes

- Reference made to the SAC for seven court cases and one arbitration case in ascertaining Shariah rulings
- Shariah standards as key reference for courts and arbitrators

Product innovation

Publication of more than 500 binding rulings and 12 Shariah standards, which serve as building blocks for product innovation

- Approved the use of hybrid contracts (e.g. *musharakah mutanaqisah* - diminishing partnership) which enabled the introduction of innovative products
- Clarity on definition and differentiation between Islamic deposits and investment accounts
- Permissibility of *al-ijarah thumma al-bai`* (leasing followed by sale)

Level the playing field

Mitigates inconsistencies that lead to competitive distortions between Islamic and conventional financial institutions

- Establishment of an appropriate mechanism for late payment charges by Islamic banks using *gharamah* (penalty) and *ta`widh* (compensation) concept
- Treatment for *ibra`* (rebate) in Islamic financing based on sale-based contracts

Source: Bank Negara Malaysia

not only instilled customer and market confidence, but have also catalysed a number of industry innovations. The SAC's endorsement of the application of *al-ijarah thumma al-bai`* (leasing followed by sale), for example, has allowed the offering of more competitive vehicle financing solutions by more than 15 Islamic banking institutions. Another area is the ruling on the imposition of late payment charges by Islamic banks using *gharamah* (penalty) and *ta`widh* (compensation) which has allowed Islamic financial institutions to operate on a level playing field with their conventional counterparts. During the year, two publications were launched in conjunction with the SAC's anniversary, namely a compilation of SAC resolutions from 2011 until 2017 and a compilation of 12 Shariah standards issued by the Bank. In addition, in January 2018, the Bank rolled out a new SAC website (www.sacbnm.org) which provides convenient access to all SAC rulings and the Shariah governance framework in Islamic finance. This website serves as a key repository for detailed *fiqh* (Islamic jurisprudence) decisions and underlying reasoning of the SAC rulings, including the rulings made in developing the 12 Shariah standards published by the Bank to date. Efforts are underway to make these digital and physical publications available in key languages, including English and Arabic.

In the area of takaful, the Bank organised a roundtable discussion at the sidelines of the 24th Annual Conference of the International Association of Insurance Supervisors in Kuala Lumpur. The Bank shared its experiences in building a progressive takaful sector, including the development of a comprehensive and robust Shariah governance framework. Participants expressed keen interest to understand the similarities and differences of takaful and insurance (in particular, mutual insurance), and the advantages of having full-fledged takaful operators as opposed to takaful windows.

Apart from regulators, the private sector also plays an important role in expanding the frontiers of Islamic finance at the global level. Over 100 professional ancillary services firms currently offer a wide spectrum of services including in the areas of Shariah, legal, accounting, tax and training in Malaysia. Given their depth and breadth of experience in developing the Islamic financial sector in Malaysia, these firms are well-positioned to help meet the growing need and interest of other jurisdictions wishing to make inroads into Islamic finance. Among key contributions by such firms include pioneering the development of the world's first Shariah standard on gold, in collaboration with the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

Cross-Sector Developments

Cross-Sector Developments

FINANCIAL MARKETS

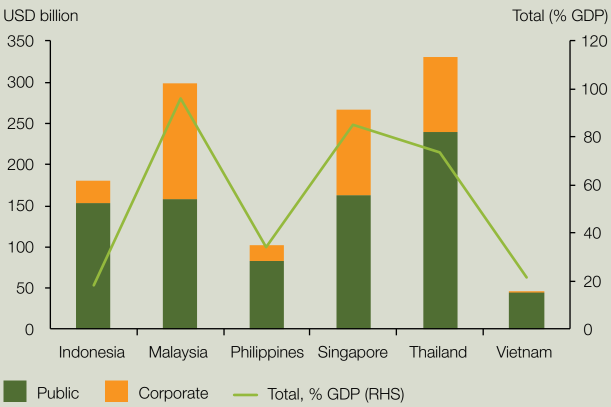
The Malaysian debt securities market remained deep with diverse participation

The Malaysian debt securities market recorded significant growth over the year, with total outstanding securities increasing by 10.1% to RM1.3 trillion as at end-2017, representing 97.6% of GDP. The market remains one of the largest in Southeast Asia (Chart 5.1). Sukuk continued to account for a larger share of total outstanding debt securities at 58.8% (2016: 56.4%) (Chart 5.2).

Participation in the Malaysian government debt securities market, supported by appointed Principal Dealers, remained robust and diverse with a total secondary trading volume of RM1.3 trillion (2016: RM1.8 trillion). Both Malaysian Government Securities (MGS) and Malaysian Government Investment Issue (MGII) papers garnered strong interest from banking institutions, institutional investors and insurance companies, registering a healthy average bid-to-cover ratio of 2.198 times throughout the year (2016: 2.275 times).

Chart 5.1: ASEAN Outstanding Local Currency Debt Securities Market

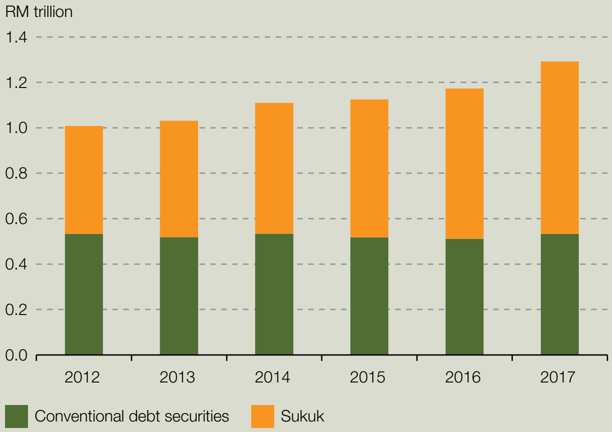
The Malaysian debt securities market remains one of the largest in ASEAN



Source: Asian Bonds Online

Chart 5.2: Outstanding Debt Securities and Sukuk (Public and Corporate)

Sukuk accounts for a larger share of total outstanding debt securities



Source: Bank Negara Malaysia

This diverse and broad investor participation in the domestic debt securities market continued to support domestic market resiliency. Amid a challenging global financial market outlook and persistent uncertainty, Malaysia experienced higher volatility in capital flows, mainly resulting from portfolio adjustments by non-resident investors. In the first quarter of 2017, the unwinding of non-deliverable forward (NDF) positions by short-term non-resident investors, particularly financial institutions and fund managers, saw a material sell-off in non-resident bond holdings. Despite this, bond yields remained relatively stable, owing to the active participation of domestic institutional investors. Volatile capital flows peaked in the first quarter of 2017 and began to subside in April, with the announcement of the second series of the Financial Markets Committee (FMC) measures which, among others, facilitated foreign exchange (FX) risk management activities through dynamic hedging flexibilities for both resident and non-resident investors (Chart 5.3).

The proportion of non-resident investor holdings in Malaysian government bonds stood at 28% of total outstanding at end-January 2018, compared to the peak of 34.7% in November 2016. Non-resident holdings are now better distributed across different maturities, with a lower concentration of 12% in securities with a tenor of less than 12 months (2016: 17%), thus posing lower risks of market volatility. Longer-term investors such as foreign central banks, governments, pension funds and insurance companies constituted close to 51.2% of overall non-resident holdings. Investments from these long-term investors contribute to greater market stability, owing to positions that are less predisposed to swings in market sentiment, and which serve at times to counteract short-term investor activities.

Strong ringgit appreciation largely driven by positive economic performance

During the year, the ringgit appreciated by 10.4% against the US dollar, closing at RM4.0620 compared to RM4.4860 at end-December 2016 (Chart 5.4). The recovery of the ringgit reflected the broad weakening of the US dollar and more importantly, better-than-expected performance of the domestic economy on the back of strong export performance and sustained domestic demand. Correspondingly, investor confidence and sentiment improved during the year.

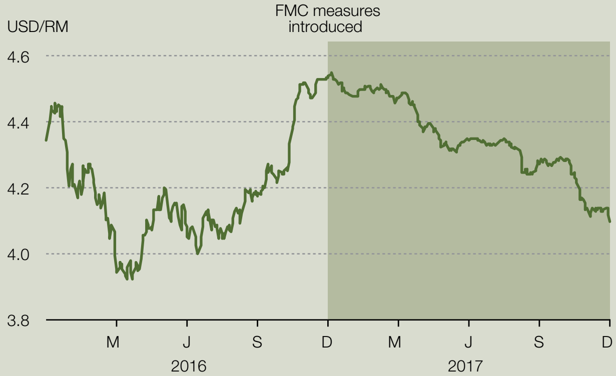
Chart 5.3: MGS Yields

MGS yields stabilised owing to active participation of domestic institutional investors

Source: Bank Negara Malaysia

Chart 5.4: Ringgit Exchange Rate against the US dollar

Ringgit appreciated 10.4% against the US dollar in 2017



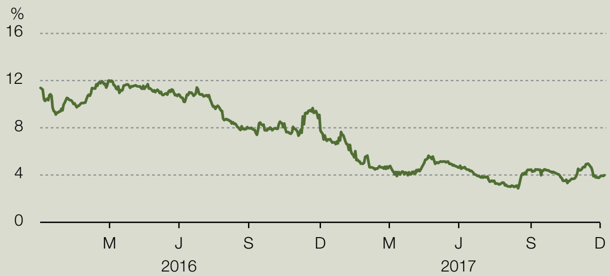
Source: Bank Negara Malaysia

The recovery of the ringgit reflected robust performance of the domestic economy and broad weakening of the US dollar

The one-month implied volatility of the ringgit averaged lower at 4.4%, compared to 9.7% in 2016 (Chart 5.5). Similarly, the ringgit's intraday movements were also less volatile with a daily average of 81 pips, compared to 228 pips in November 2016.

Chart 5.5: Onshore USD/RM one-month Implied Volatility

Steady appreciation of ringgit with lower average one-month implied volatility of onshore USD/RM



Source: Bank Negara Malaysia

FMC measures contributed positively to financial market development

In December 2016, the FMC together with the Bank announced several measures to promote a deeper, more transparent and well-functioning onshore FX market. In 2017, the FMC introduced the second and third series of measures aimed to improve market liquidity and resiliency. A summary of the measures introduced to-date is provided in Diagram 5.1.

Diagram 5.1

Summary of FMC Measures

1st Series
Dec 2016

Rebalance onshore FX demand and supply
- 25% retention of export proceeds in foreign currency (FC)
- Trade settlement among residents in ringgit only
- Streamline onshore and offshore FC investment limit

Promote onshore FX risk management
- Active hedging below RM6 million net open position
- Active hedging for institutional investors
- Expansion of Appointed Overseas Office framework

2nd Series
Apr 2017

Additional FX risk management flexibilities
- Streamline passive and dynamic hedging flexibilities for investors
- Active hedging for corporations

Improve bond market liquidity
- Liberalise regulated short-selling by allowing all residents to participate

Promote fair and effective market conduct
- New code of conduct for wholesale financial market
- Principles for Fair and Effective Financial Market

3rd Series
Nov 2017

Additional FX risk management flexibilities
- Allow hedging of ringgit exposure arising from trading of palm oil derivative contracts on Bursa Malaysia

Enhance liquidity intermediation
- Issuance of Bank Negara Interbank Bills to onshore licensed banks
- Introduce regulated short-selling of MGII under bilateral binding promise concept
- Expand eligible collateral for monetary operations

Source: Bank Negara Malaysia

FMC measures accorded greater FX risk management flexibilities

The existing dynamic hedging framework was streamlined to allow registered institutional investors to fully hedge and actively manage their exposures, including unwinding hedging positions. Registered non-resident institutional investors are also allowed to actively manage an additional 25% of ringgit exposures. For ringgit exposures arising from palm oil derivative contracts (Crude Palm Oil Futures and Options on Crude Palm Oil Futures) traded on Bursa Malaysia, registered non-resident market participants are allowed to hedge their exposures with onshore banks or appointed overseas offices up to the net open position of the contracts.

Residents are also provided the flexibility to actively manage FX risk exposures up to an aggregate net open position limit of RM6 million per client per bank, without having to submit documentary evidence. Previously limited to US dollar and China Offshore Spot (CNH), this provision has since been expanded to include three additional currencies, namely British pound (GBP), euro (EUR) and Japanese yen (JPY). A prerequisite to utilise this flexibility is to undertake a one-off declaration of hedging intent to the onshore banks.

The measures introduced in 2017 primarily focused on increasing flexibility for financial market participants, including corporations, to hedge their FX exposures effectively, and increasing trading flexibilities and instruments.

Since the implementation of these measures, onshore FX liquidity has improved. The positive effect of rebalancing between FC demand and supply saw the average daily trading volume in the onshore FX market increase to USD9.9 billion, compared to USD8.1 billion in 2016. On the other hand, the transaction volume of the ringgit NDF market contracted by 70% since November 2016 to USD1 billion.

The dynamic hedging framework also resulted in increased FX forward transactions by non-resident institutional investors. Demand for hedging instruments by investors actively managing their FX risk exposures through the onshore forward market were met with a range of FX products offered by domestic banking institutions. Response by investors was encouraging with 74 registered fund managers with total eligible assets worth RM123 billion, and 21 registered corporates with a total allowed hedging volume of up to RM9.2 billion availing of the flexibilities as at December 2017. Increased onshore FX hedging of palm oil derivative contracts was also observed among 10 registered non-resident palm oil market participants with exposures of RM27.1 billion.

Additionally, goods and services flows now account for a significant proportion of the onshore FX market transaction volume at 66%, compared to 49.6% in the previous year. This change reflects pricing in the onshore FX market that is now mainly driven by real sector activities, rather than speculative transactions.

Local currency settlement framework expanded

Following the launch of the baht-ringgit settlement framework in March 2016, the Bank, in collaboration with the Bank of Thailand, agreed to expand the framework on 11 December 2017 to include direct investments and income transfers as eligible underlying transactions for settlements in the local currencies. On the same day, the Bank and Bank Indonesia launched a rupiah-ringgit settlement framework to promote trade settlements between Malaysia and Indonesia in local currencies.

These frameworks provide greater FX administration flexibilities for exporters, importers and investors to manage FX risks through settlements of trade and direct investment in local currencies. By reducing exposures to FX settlement risk, the flexibilities help reduce the cost of doing business. To operationalise both frameworks, appointed banks have been accorded additional foreign exchange administration flexibilities in the respective countries to offer local currency-denominated financial products such as deposits and financing. It is envisaged that the increased demand for local currency financial products will further support the development of regional financial markets.

FINANCIAL SYSTEM INTEGRITY

Milestones in the implementation of the Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) National Strategic Plan

The National Coordination Committee to Counter Money Laundering (NCC), comprising 16 agencies, including the Bank, has made significant progress in the implementation of the AML/CFT National Strategic Plan 2015-2020. Key achievements in 2017 include:

- Strengthening of legal mechanisms. Revisions to the Companies Act 2016 have established requirements for enhanced disclosures of beneficial owners of legal persons registered in Malaysia. Additionally, the definition of 'authorised officers' under the Strategic Trade Act Order was broadened to improve the efficacy of Targeted Financial Sanctions (Proliferation Financing). Under the Order, authorities are empowered to compound offences committed and set a minimum fine for any offences specified, in addition to the existing powers for criminal prosecution;
- Improved arrangements for the sharing of information and training of industry compliance officers on terrorist financing risks, resulting in higher quality suspicious transaction report submissions; and
- Developed parameters for requesting mutual legal assistance and extradition across all law enforcement agencies to ensure that cooperative arrangements with Malaysia's international counterparts support an effective and concerted response to money laundering and terrorism financing (ML/TF) threats. These achievements also reflect the NCC's continued commitment to meet the Financial Action Task Force recommendations set out in the 2015 Mutual Evaluation Report on Malaysia.

Making digital currencies transparent in Malaysia

Due to the recent proliferation of digital currencies, the Bank has imposed AML/CFT obligations on digital currency exchangers along with requirements for disclosure of key information to promote greater transparency and enable monitoring of market activities. Any person offering services to exchange digital currencies either to fiat money or to another digital currency and vice versa will be subjected to obligations under AMLA (Schedule 1). Reporting obligations of digital currency exchange businesses, which include requirements on transparency and disclosure, are further elaborated in the policy document on AML/CFT – Digital Currencies (Sector 6) published by the Bank in February 2018.

The invocation of reporting obligations does not imply the authorisation, licensing, endorsement or validation by the Bank of any entities involved in the provision of digital currency exchange services. Section 24 of the Central Bank of Malaysia Act 1958 recognises ringgit as the only legal tender in Malaysia, and thus members of the public are advised to ensure that they understand and carefully assess the risks involved in dealing in digital currencies.

Strengthening legislative and regulatory framework to counter ML/TF risks

The Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA) was also strengthened during the year through amendments to the Second Schedule of AMLA. The amendments broaden the scope of predicate offences relating to ML/TF risks. Sixty-one new predicate offences from several legislations have been prescribed, including the recently amended Companies Act 2016 and the new Interest Scheme Act 2016. Of these offences, 11 relate to abuse of powers by company directors for their personal gain while nine offences concern interest schemes and other threats to investors' interest.

Fostering international commitment and partnerships

The Bank hosted the third Counter-Terrorism Financing (CTF) Summit in November 2017, in partnership with the Australian Transaction Reports and Analysis Centre and Indonesia's Pusat Pelaporan dan Analisis Transaksi Keuangan. Key highlights from this year's summit include:

- Launch of the report on Regional Terrorism Financing (TF) Risk Assessment of Non-Profit Organisations (NPOs) and on Cross-Border Movement of Money and Bearer Negotiable Instruments in the region. This report marks the delivery of commitments made in the Nusa Dua Statement at the 2016 summit. The Regional TF Risk Assessment on NPOs covers eight Asia-Pacific nations: Malaysia, Australia, Brunei, Indonesia, New Zealand, the Philippines, Singapore and Thailand; and
- Adoption of the KL Communique, which embodies the commitment of the regional working group to continue to address TF risks via joint initiatives, widens the CTF Summit's scope to include high-risk financial crimes and pledges to expand collaboration with other Southeast Asian countries, particularly through expanding membership of the newly established Southeast Asia Counter Terrorism Financing Working Group. The KL Communique also calls on regional authorities to improve data collection, enhance information sharing and develop 'red flag' indicators of high-risk NPO activity to help financial institutions and law enforcement agencies better detect and respond to suspicious activity.

In May 2017, the Bank entered into a formal cooperative framework with the financial intelligence units of Australia, Indonesia and Malaysia (also known as the Trilateral Regulatory Exchange Programme, REP). The objectives of the REP are to: (i) improve risk-based supervision models, including the development of sectoral and thematic risk assessments; (ii) facilitate knowledge sharing on the regulation of the remittance industry; and (iii) propose relevant and appropriate regulatory approaches for the regulation of virtual currencies, payment platforms and new emerging technologies.

Combating money laundering through industry collaboration and enhanced supervision

Engagements with the banking industry associations through the Compliance Officers Networking Group focused in particular on the need for increased scrutiny of account holders suspected of serving as mule account holders. This aims to prevent financial institutions' account facilities from being misused for criminal activities, especially by syndicates that 'rent' accounts for the purpose of moving illicit funds without detection. Banking institutions are expected to undertake greater due diligence for such account holders and enforce necessary counter-measures where account holders fail to provide reasonable justification for their transactions. Such measures include the closing of accounts and submission of suspicious transaction reports to the Bank.

In light of the growing sophistication and complexity of ML/TF risks, the Bank established a dedicated unit during the year to oversee AML/CFT matters for Designated Non-Financial Businesses and Professionals (DNFBPs). The DNFBP supervision unit conducted 38 on-site examinations across six sectors: real estate agents, accountants, company secretaries, trust companies, law firms and casinos. The reviews identified challenges in fully implementing customer due diligence (CDD) requirements in five of the six sectors, mainly due to the lack of awareness and understanding of AML/CFT reporting obligations. To address this, the Bank conducted 37 engagement and awareness sessions throughout the year for these sectors.

ENFORCEMENT ACTIONS

During the year, the Bank took various enforcement actions to address statutory offences and non-compliances with relevant laws and requirements. A summary of the enforcement actions taken in 2017 is provided in Table 5.1.

Specific to cases involving illegal financial schemes, joint enforcement investigations were conducted with relevant law enforcement agencies under the Sub-Committee on Offences related to Financial Fraud and Scams (SCOFFS) established by the NCC. In 2017, SCOFFS conducted six joint raids on companies suspected to be conducting illegal financial scheme businesses, resulting in assets valued at more than RM400 million seized to assist investigations. These companies are currently being investigated for various offences under AMLA, the Financial Services Act 2013, the Penal Code, Companies Act 2016 and the Income Tax Act 1967. In addition, the Bank has directed financial institutions and money services business providers to heighten their vigilance in detecting accounts which are used by the perpetrators of financial scams. This includes enhancing CDD processes to prevent financial institutions from becoming conduits for illegal schemes.

Table 5.1

Enforcement Actions Taken in 2017

Area	Enforcement Actions
Illegal deposit taking	• One entity was convicted under section 25(1) of the Banking and Financial Institutions Act 1989.
Unauthorised provision of money services	• Six entities were convicted for unauthorised provision of money services business under section 4(1) of the Money Services Business Act 2011.
Non-compliance with regulatory requirements	• Administrative monetary penalties amounting to RM400,000 were imposed on one bank for failure to comply with approval conditions under section 291(1) of the Islamic Financial Services Act 2013 (IFSA). • Compound amounting to RM1.8 million was imposed on one bank for failure to comply with Shariah requirements under section 29(3) of the IFSA.
Non-compliance with foreign exchange administration requirements	• Compounds amounting to RM3.7 million were imposed on two banks and one non-bank entity for failure to comply with the foreign exchange administration requirements under section 214(2) and section 214(6)(f) of the Financial Services Act 2013.
Non-compliance with AML/CFT requirements	• Compound amounting to RM1.4 million was imposed on one bank for failure to comply with reporting obligations and CDD requirements under section 14 and 16 of the AMLA. • Administrative monetary penalties amounting to RM7.9 million were imposed on one bank for failure to comply with reporting obligations and CDD requirements under section 14 and section 16 of the AMLA. • Three entities were convicted under section 4(1) of the AMLA for offences relating to money laundering.

Source: Bank Negara Malaysia

As of December 2017, financial institutions have exited 884 accounts of business entities and their beneficiaries related to illegal financial schemes.

Effective January 2018, the Bank will also publish enforcement actions taken against financial institutions and intermediaries for non-compliance with rules and regulations. This aims to further increase the impact of enforcement actions as a credible deterrent.

PRUDENTIAL FRAMEWORK

Strengthening Conduct, Culture and Risk Management in the Financial Industry

Two key papers on employee screening and responsibility mapping were issued to reinforce the ethical standards and integrity of the financial industry. This area of work complements existing regulatory expectations on governance and conduct by strengthening the focus on softer elements of behaviour and culture. An elaboration of the Bank's approach to influencing behavioural outcomes within the financial sector is set out in the box article on 'Strengthening Conduct and Culture in the Financial Industry'.

(i) Employee Screening

The Bank issued the final standard on Employee Screening in March 2018 following a one-month consultation in October 2017. The policy aims to promote an ethical workforce within the financial sector through strengthened screening practices for recruitments by financial institutions. With greater transparency of the conduct histories of new hires, financial institutions are expected to be better placed to make informed hiring decisions. While financial institutions will continue to retain full discretion over final hiring decisions, conduct histories surfaced during screening should be taken as a signal for greater scrutiny in the character assessments of the new hires.

Salient requirements of the standard are as follows:

- A financial institution must undertake employment reference checks of prospective new hires with past and current employers of the individuals;
- A financial institution receiving a request related to an employee reference check must provide relevant information in response to the request, including information on past disciplinary proceedings the individual may have been subject to, irrespective of whether the disciplinary proceedings have been concluded; and
- A prospective employee must provide a statutory declaration on his/her past criminal convictions and pending criminal investigations.

Financial institutions have been given until 30 June 2018 to prepare for implementation of the new requirements.

(ii) Responsibility Mapping

The Bank also issued a discussion paper on Responsibility Mapping in February 2018, detailing a conceptual framework to strengthen the accountability of key senior roles within financial institutions. Preliminary concepts being considered entail a formal prescription of responsibilities for significant senior roles with legal liabilities attached for breaches of those responsibilities.

Responsibility Mapping aims to reinforce an appropriate tone from the top in shaping organisational culture and behaviour, and in regulating conduct within financial institutions in a sustainable way. The discussion paper addresses the need for a sharper focus on individual accountability to complement and give effect to existing oversight arrangements that promote prudent and ethical conduct. The Bank expects to engage further with the industry on more detailed proposals for implementation over the course of 2018.

(iii) Outsourcing

In September 2017, the Bank issued an exposure draft on the revised standard on outsourcing for public consultation. The requirements seek to ensure that financial institutions' risk management practices in relation to outsourcing arrangements remain robust and are commensurate with the nature and level of risk of the arrangements. This is particularly important in light of the more extensive nature of outsourcing by financial institutions in recent years to improve operational efficiency and flexibility in managing business changes. Strengthened requirements on the conduct of due diligence on service providers and protection of data confidentiality aim to mitigate the potential risks posed by outsourcing relationships, including heightened legal risks from any unauthorised disclosure of confidential information. In addition, the revised requirements will ensure the Bank's continued ability to effectively supervise financial institutions in respect of outsourced activities, particularly where the arrangements could pose threats to the ability of financial institutions to maintain critical functions during stress periods and resolution.

Key enhancements to the outsourcing standard include:
- Strengthened governance and risk management requirements imposed on the board and senior management in managing outsourcing risk;
- Heightened expectations of the due diligence process carried out on service providers;
- Stronger data protection requirements for both customer and proprietary information of financial institutions, including upon termination or cessation of outsourcing arrangements; and
- Enhanced expectations to preserve business continuity and the ability to effectively implement recovery and resolution plans.

CONSUMER PROTECTION FRAMEWORK AND EMPOWERMENT

The protection and empowerment of financial consumers remains a key priority of the Bank with focus on three key areas, as illustrated in Diagram 5.2.

Strengthening Protection of Retail Borrowers

During the year, the formulation of a consumer credit law, a joint initiative between the Bank, the Ministry of Domestic Trade, Co-Operatives and Consumerism (KPDNKK) and Ministry of Urban Wellbeing, Housing and Local Government made further progress. The new law aims to deliver more consistent standards in the level of protection afforded to retail borrowers and support the effective management of risks in the consumer credit market. A draft Bill is expected to be published for public consultation by KPDNKK in 2018. Key elements of the Consumer Credit Bill are summarised in Table 5.2.

Increased expectations on customer information management and fair treatment of consumers

As financial service providers (FSPs) gain access to an ever-increasing amount of data and information in the course of their operations, the protection of customer information against theft and misuse becomes critical in maintaining public confidence in the financial system. In October 2017, the Bank published the standards on the Management of Customer Information and Permitted Disclosures. The standards address requirements for FSPs to institute strict policies and procedures to safeguard the security and confidentiality of customer information throughout the information

Diagram 5.2

Key Focus Areas for Consumer Protection and Empowerment in 2017

Promoting Responsible Conduct towards Financial Consumers

- Formulation of Consumer Credit Act (CCA)
- Issued policy document on Management of Customer Information and Permitted Disclosures
- Development of exposure draft to ensure fair dealing towards financial consumers
- Enhancement to industry Customer Service Charter
- Survey on Customer Satisfaction Index

Strengthening Redress Mechanisms

- Operationalisation of the Ombudsman for Financial Services (OFS)
- Introduction of Consumer Complaints Redress Profiling Framework

Expanding Outreach to Consumers

- Organised Karnival Kewangan in major cities throughout the country
- Expanded "Train-the-Trainers" programme
- Outreach to raise awareness on illegal financial schemes

Source: Bank Negara Malaysia

Table 5.2

Key Elements of the Consumer Credit Bill

Regulatory scope	• Covers retail borrowers who obtain credit, wholly or predominantly for personal, domestic or household purposes and includes both conventional and Shariah-based credit activities
Governance and oversight	• Establishment of the Council for Consumer Credit Malaysia as an inter-agency coordination platform for the implementation of the CCA • KPDNKK as the principal administrator of the CCA • The Bank, the Securities Commission Malaysia and the Malaysia Co-operative Societies Commission continue to regulate entities under their purview
Authorisation	• Credit providers extending credit to retail borrowers will require authorisation from the respective regulators and be subject to gatekeeping requirements such as minimum capital requirement and fit and proper criteria for directors and senior officers
Key consumer protection requirements	• Credit providers to comply with minimum requirements relating to advertisement, solicitation, credit agreement, financing charges, credit assessment, debt collection practices, debt relief, complaints handling and dispute settlement • Empowers regulators with flexibility to enforce stricter conduct requirements on credit providers under the regulator's purview

Source: Bank Negara Malaysia

lifecycle, from collection to disposal. This includes protection from unauthorised access, modification or disclosures and ensuring staff are sufficiently trained to implement controls effectively. Additionally, the policy sets out expectations on, and the accountability of, FSPs in ensuring the proper handling of customer information by appointed representatives, agents and outsourced service providers.

The Bank is currently in advanced stages of finalising specific proposals to promote the fair treatment of financial consumers, focusing on standards for fair dealing and responsible behaviour towards financial consumers. The Bank expects to issue an exposure draft on the proposals within the first half of 2018. The requirements will address the Bank's heightened expectations on the board and management to have a strong and consistent tone-from-the-top on placing fair treatment of consumers at the centre of business operations. In addition, greater emphasis is given to the importance of providing clear and concise product information for customers to make informed choices and offering products that are appropriate to the customers' needs and financial circumstances. These standards are intended to complement other policies previously issued by the Bank, by encouraging FSPs to direct and influence behaviour beyond compliance and promote fair treatment of consumers as an integral part of the business culture of all FSPs.

Improving the service quality of the banking, insurance and takaful sectors

During the year, the industry undertook further initiatives to improve the overall quality and efficiency of customer services by revising the industry's Customer Service Charter (Charter), which was first introduced in 2011. The original Charter was substantially enhanced to include minimum service standards that reflect the guiding principles for good customer service. These principles are premised on understanding customers' needs; delivering timely, transparent, personable and efficient services; making financial products accessible; and providing a fair, timely and transparent claims settlement process for the insurance and takaful sector. The revised Charter was adopted by banking institutions in September 2017 and is expected to be adopted by insurers and takaful operators in the first quarter of 2018. As a means to gauge FSPs' performance against the Charter, results from the first independent Customer Satisfaction Index (CSI) survey conducted for the banking sector and insurance/takaful sectors are expected to be published by the end of the first and third quarter of 2018, respectively. Moving forward, plans are for the CSI survey to be carried out once every two years to assess the level of customer service in the financial sector on a continuing basis.

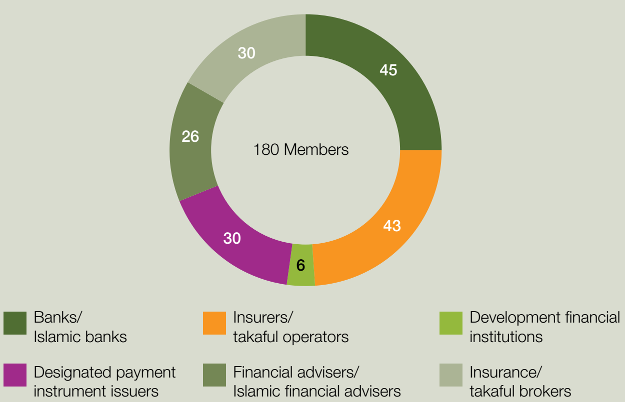
Strengthening dispute resolution channels for consumers

An essential element in ensuring the fair treatment of consumers is the availability of dispute resolution channels. In this respect, the Ombudsman for Financial Services (OFS), formerly known as the Financial Mediation Bureau (FMB), serves as Malaysia's primary alternative avenue for dispute resolution relating to financial services and products. Since commencing operations in October 2016, the OFS resolved 1,274 cases received in the first 15 months of operations (Chart 5.6). Nearly three quarters of these cases were resolved with both the complainant and the FSP arriving at an amicable outcome during the mediation stage, compared to 43% under the previous scheme i.e. FMB. This reflects improvements made to dispute resolution arrangements under the OFS. Seventy-seven percent of the new cases resolved were settled within six months, while the remaining took longer to resolve mainly due to gaps in documentation. The imposition of case fees on FSPs from 2017 appeared to encourage more proactive management of complaints by FSPs, with complaints referred to the OFS declining by 17% during the year.

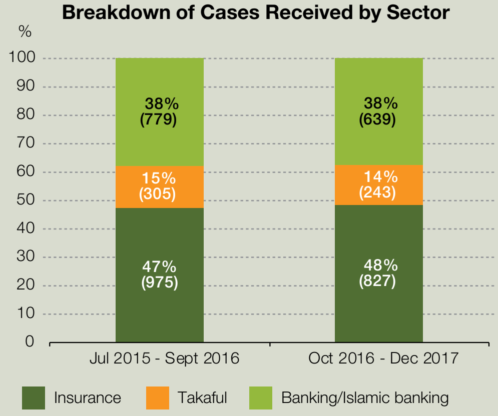
To further strengthen redress management for financial consumers, the Bank has established a Consumer

Chart 5.6: Snapshot of the OFS during the first 15 months of Operations

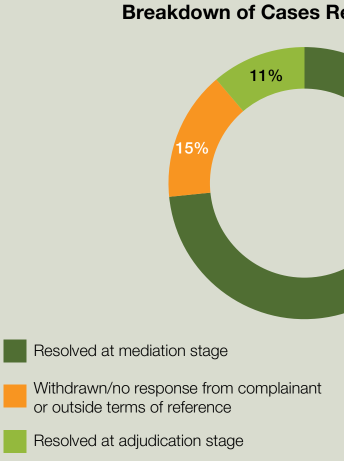
Improvements to dispute resolution process under the OFS promote more efficent and amicable settlement



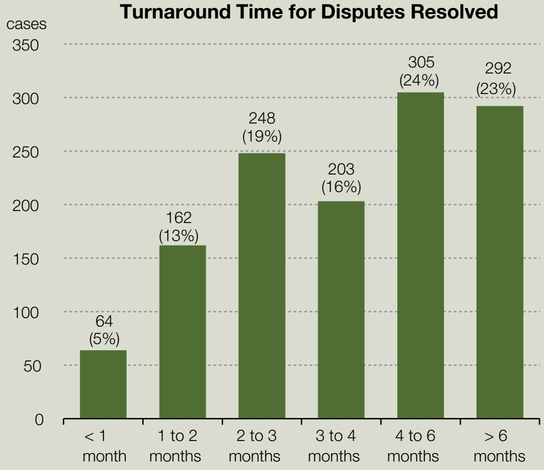
Increased membership under the new OFS structure driven by participation of insurance and takaful brokers, payment instrument issuers and financial advisers



The total number of cases received reduced by 17% to 1,709 cases. This indicates more proactive management of complaints by FSPs



Out of the cases resolved and closed, 74% were settled through mediation where both the complainant and the FSP agreed on an amicable settlement



77% of the cases resolved were settled within six months, with 37% settled within three months

Source: Bank Negara Malaysia, OFS Statistical Reports

Complaints Redress Profiling Framework, a surveillance tool for assessing FSPs' handling of consumer complaints and redress practices. The quality of complaints management in FSPs is assessed against five key drivers of fair complaint handling, namely effectiveness of senior management, compliance and policy, quality assurance, staff competence and transparency practices. Based on a profiling assessment undertaken during the year, a majority of FSPs were observed to have made improvements in their complaint practices and compliance requirements. In particular, a number of financial institutions have taken steps to strengthen senior management oversight functions through improved management information that focuses on the effectiveness of FSPs in resolving complaints at the first level of complaint management. Reflecting this focus, most FSPs have streamlined the complaint management processes to improve response times and feedback loops to enhance product and service offerings.

Greater public awareness and strengthened consumer empowerment

The Bank's public outreach efforts expanded significantly in 2017 as presented in Diagram 5.3.

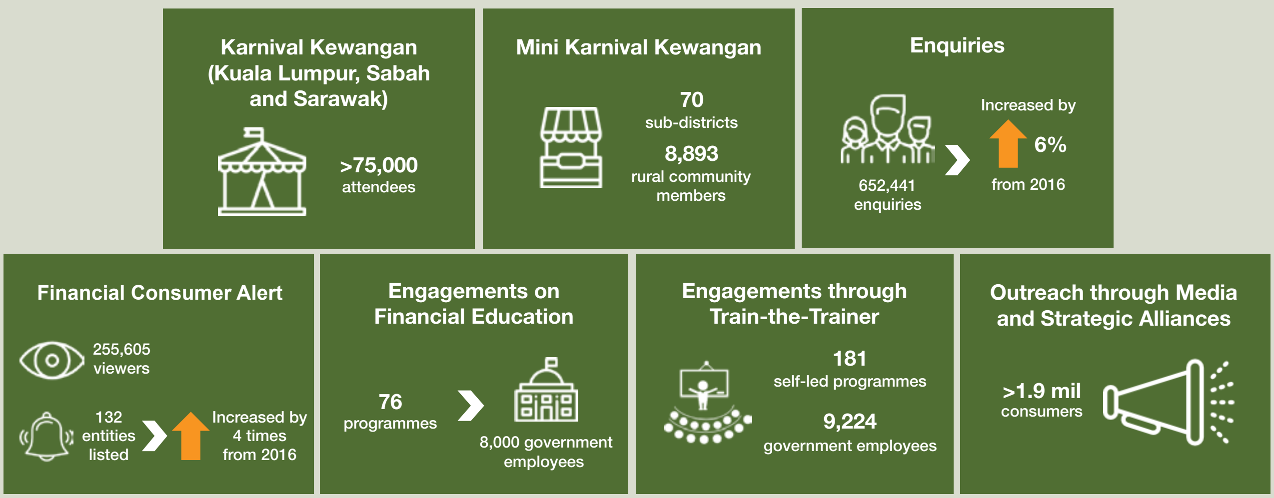
During the year, the Bank organised a series of *Karnival Kewangan* events, a new flagship nationwide initiative featuring a range of services and educational activities to increase public awareness and knowledge on financial services, including their rights as consumers. The events were supported by the participation of local FSPs and government agencies. The first *Karnival Kewangan* was held in Kuala Lumpur, followed by Kota Kinabalu and Kuching. In total, the three events attracted more than 75,000 attendees. Building on the experience and momentum of these campaigns, a series of smaller-scale Mini Karnival Kewangan were organised at 70 sub-districts throughout the nation.

More than 75,000 people attended three *Karnival Kewangan* events featuring a range of services and educational activities to increase public awareness and knowledge on financial services and rights as consumers

Complementing education initiatives that were pursued for the public at large through the Credit Counselling and Debt Management Agency (AKPK), the Bank also conducted financial education engagements with government employees as part of the effort to raise awareness on prudent financial management and illegal financial schemes. To create a multiplier impact in financial education, the Bank established a Train-the-Trainers programme in collaboration with counsellors from The Royal Malaysian Police (RMP), Ministry of Health and Sarawak Chief Minister's Office. As a result, a total of 181 self-directed programmes have been conducted by trained counsellors with 9,224 participants.

Diagram 5.3

Outreach to Malaysian Financial Consumers in 2017: Key Statistics



Source: Bank Negara Malaysia

Common modus operandi of phone scams and money game schemes

In 2017, among the highest cases of fraud were phone scams and money game schemes with total losses reported amounting to RM22.3 million. Phone scams commonly involve persons impersonating the Bank or RMP officers, requesting victims to transfer money or risk being blacklisted. Victims were contacted on non-working days to ensure that the call could not be validated and were duped into opening internet banking accounts using specified account details to transfer funds to the scammer's account. In the case of money game schemes, operators often posed as currency trading companies offering monthly returns as high as 20%. Investment packages would be priced as low as USD50 to encourage investors from different income brackets to join the scheme. Investors would typically receive returns for several months before they were informed that the scheme operator's website had been hijacked and monies invested were lost.

Heightening Awareness on Financial Crime

In view of the rapidly evolving modus operandi of various financial fraud and crimes over the last few years, public awareness of steps that consumers can take to protect themselves continue to be a main priority for the Bank. Through various initiatives targeted at empowering financial consumers, including through the mediums of social media, television and radio, the Bank has reached out to nearly two million individuals to caution and provide guidance on how to recognise and avoid falling victim to financial fraud.

The Financial Consumer Alert (FCA) list established by the Bank in 2012, aims to alert members of the public on companies and websites that are neither authorised nor approved under the relevant laws and regulations administered by the Bank to carry on regulated financial activities. In 2017, the FCA list received over 250,000 website visits, a four-fold increase compared to its first year of publication on the Bank's website. The significant increase in public awareness is a welcome development and is particularly important amid the growing number of entities listed in the FCA (2017: 409 entities, 2016: 277 entities).

Financial consumers were also more proactive, as reflected in the higher number of enquiries received by BNMLINK and TELELINK, the Bank's key point of contact for enquiries and redress on financial matters raised by the general public (Chart 5.7). Conversely, fewer complaints were received by the Bank against FSPs in 2017 (Chart 5.8).

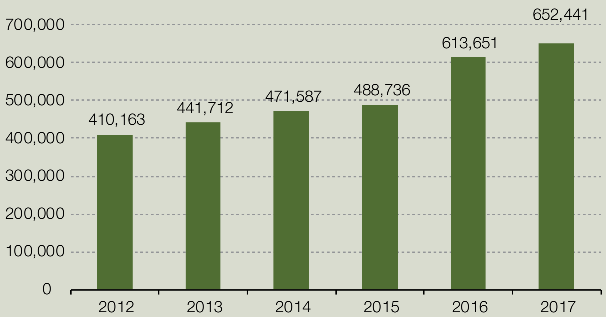
MONEY SERVICES BUSINESS (MSB)

Greater migration to formal MSB channels through digitalisation

The growing usage of electronic remittance services remained an important enabler for the migration of remittances from informal to formal channels, with increased utilisation of mobile and online platforms (e-remittances). Total outward remittance recorded by the MSB industry in 2017 amounted to RM33 billion, of which about 2% is estimated to be from transactions previously conducted through informal channels (2016: 9%). In absolute terms, estimates of remittance through informal channels were lower than in 2016, by about 8%. Greater convenience and accessibility provided by e-remittance platforms have attracted higher numbers

Chart 5.7: Enquiries Handled by the Bank

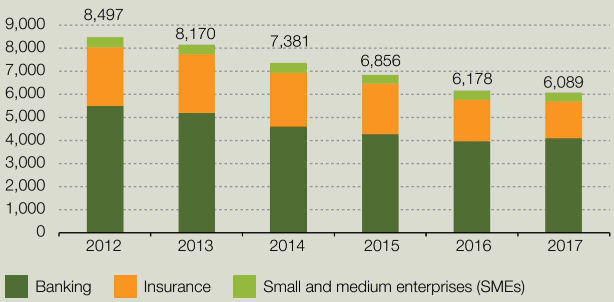
Higher enquiries on financial matters reflect more proactive financial consumers



Source: Bank Negara Malaysia

Chart 5.8: Complaints Received by the Bank

Complaints received against FSPs by the Bank on a declining trend



Source: Bank Negara Malaysia

of retail consumers, increasing the market share of e-remittances to 12.3% in 2017 (2016: 7.8%). Key statistics for the remittance industry in 2017 are summarised in Diagram 5.4 below.

During the year, the Bank issued a supplementary policy document on AML/CFT for Money Services Business, which allowed approved e-remittance service providers to conduct Know-Your-Customer through digital platforms (electronic Know-Your-Customer, eKYC) when on-boarding a new customer. This eliminated the need for a physical presence at the operator's premises, thus making transactions more cost and time efficient. All individual customers with a banking account may utilise the eKYC facility. A government measure requiring salaries of foreign workers to be paid by employers directly into banking accounts, as announced in Budget 2018, will also facilitate the conduct of eKYC for foreign workers. Collectively, these measures are expected to spur greater usage of formal remittance channels.

The Bank issued a policy document to enable e-remittance service providers to conduct KYC through digital platforms when on-boarding a new customer

In the wholesale and retail currency exchange segment, increased retail demand, supported by the growing reach of branches and agents, resulted in sustained growth in currency exchange transactions which increased from RM84 billion to RM97 billion during the year. This increase continued to reflect the demand for common currencies including Singapore dollar, US dollar and Thai baht.

Diagram 5.4

Key Statistics of Remittance Business for 2017

Outward remittance	**RM33 billion**
Number of e-remittance service providers	**17** Increased from **10** from 2016
Cost of remittance transactions	**2.96%** VS **5%** Benchmark set by World Bank

Source: Bank Negara Malaysia

Education and awareness key to driving migration to formal MSB channels

Throughout the year, the Bank conducted numerous nationwide awareness campaigns, including through social media channels, to educate consumers on the benefits of dealing with authorised providers and the risks of using informal channels.

Building on the successful impact of Project Greenback 2.0 in Johor Bahru, which completed a two-year run in December 2017 (Diagram 5.5), the Bank will be implementing Project Greenback in a second remittance champion city in Malaysia – Kota Kinabalu. Launched in March 2018, the project is expected to benefit more small and medium enterprises (SMEs) and foreign workers by applying innovative approaches developed under the first project and promoting e-remittances on a wider scale.

As an initiative to further encourage the usage of formal MSB channels, a new mobile application by the Malaysian Association of MSB (MAMSB) has been introduced to provide customers with convenient access to price comparisons, locations of MSB companies, customer reviews and avenues to lodge complaints and report illegal MSB activities. This development, which has been actively encouraged and supported by the Bank, will significantly increase the level of transparency and competition in the MSB sector, in turn benefiting consumers through improved efficiencies and quality of services provided.

Elevating the professionalism of the MSB industry

Raising the ethical and professional standards of the MSB industry continued to be a key priority for the Bank. In 2017, the Bank made it mandatory for all MSB compliance officers to be certified or accredited by recognised accreditation bodies. This will ensure all relevant officers are sufficiently competent and technically-equipped to undertake their responsibilities in the areas of regulations, particularly with respect to AML/CFT compliance. The industry expects to accredit at least one-third of all compliance officers employed in MSB companies by end-2018. Additionally, principal MSB licensees are required to ensure that all their agents register as MAMSB members. This is to ensure consistent standards of compliance and professionalism, in line with the rising number of MSB agents appointed in the industry.

Diagram 5.5

Snapshot of Project Greenback 2.0

Impact

Lower average cost to remit funds from JB	Increase in total value of outward remittances from JB
2015: 3.3% (National industry average: 2.7%) → 2017: 2.1% (National industry average: 3.0%)	SMEs: *21%; Foreign workers: *156%
	*compared to 2015

Source: Bank Negara Malaysia

Going forward, the Bank expects further consolidation of the industry to contribute to the emergence of more professional and stronger industry players with expanded capabilities to compete effectively and meet higher compliance standards.

Enhancing the Bank's supervisory and regulatory capabilities

The Bank has also taken steps to bolster the regulation, supervision and surveillance of the MSB industry by leveraging on data analytics and modelling tools to detect suspicious transactions, supervise industry players and conduct surveillance on illegal MSB activities. Technology is also being deployed to improve regulatory efficiency. This includes the development of an online platform for submissions of regulatory applications by MSB licensees, which is expected to be launched mid-2018. Proposals are also being considered to enhance the Money Services Business Act 2011 to support swifter and more effective enforcement actions against illegal MSB operators.

FINTECH INNOVATION

Fostering innovation through the Regulatory Sandbox

The Bank remains committed to advancing technological innovation in areas that will enable more efficient and accessible financial services. Since the implementation of the fintech Regulatory Sandbox in October 2016, 53 applications have been received, of which seven solutions have been admitted into the Sandbox while most of the remaining applicants were guided to implement their solutions based on existing frameworks that are already supportive of such solutions. The approved solutions under the Sandbox include digital money services businesses, insurance aggregator platforms, biometric authentication and secured chat platform for banking transactions. The Sandbox enables fintech companies and financial institutions to test innovative products, services and business models in a live market environment within specified testing parameters and safeguards. The live testing of digital money services businesses since June 2017 has enabled the use of eKYC capabilities to facilitate over 2,000 customers in performing online remittances amounting to RM20.7 million, while insurance aggregator platforms tested in the Sandbox saw more than 17,000 customers make insurance and takaful purchases through the platforms.

Seven solutions have been admitted into the Sandbox which include digital money services business, insurance aggregator platforms, biometric authentication and secured chat platform for banking transactions

Evidence-based policy development

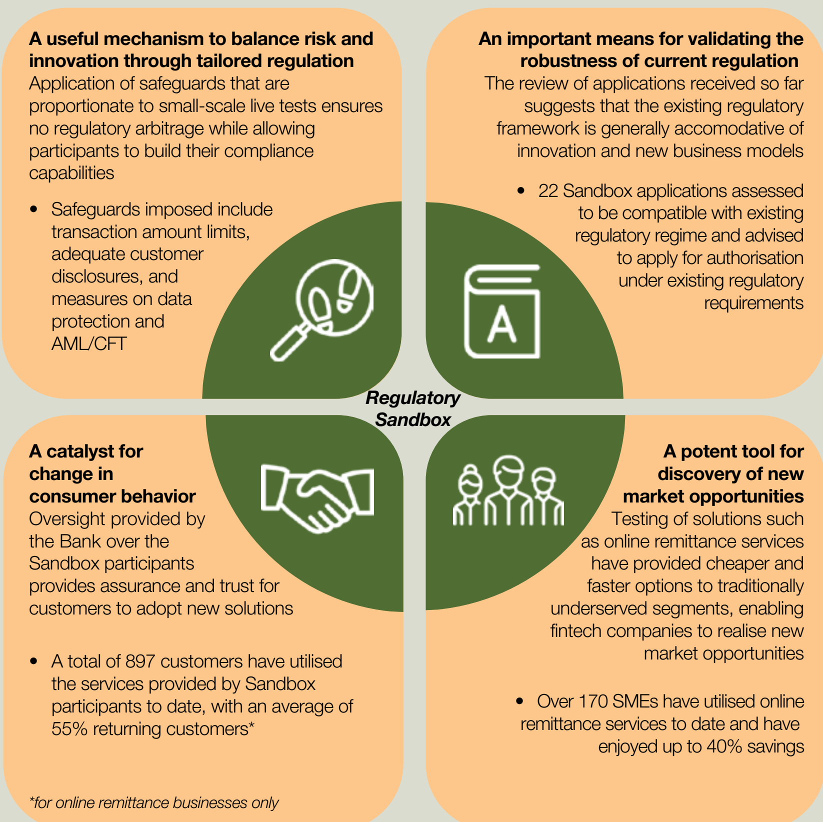
In addition to testing the commercial viability and scalability of fintech solutions in a live environment, the Sandbox also serves to support an evidence-based approach in developing appropriate regulations for innovations in financial services. For example, the successful testing of online money services businesses in the Sandbox provided valuable input for the development of the policy document on eKYC requirements for licensed remittance service providers, particularly in determining the appropriate control measures to be adopted. The Bank is also developing a regulatory framework for online product aggregators based on the experience of three aggregators participating in the Sandbox.

Greater awareness and collaboration through strategic engagements

In a bid to broaden interest in fintech developments among the wider public, the Bank organised Fintech

Diagram 5.6

Key Reflections from the Regulatory Sandbox Framework



Source: Bank Negara Malaysia

Hacks, a nationwide campaign in which the public was invited to provide views and opinions on the pain points, or areas that can be improved, in the delivery and consumption of financial services. Through the initiative, the Bank had also reached out to 11 universities across Malaysia to engage with students and build awareness. In total, approximately 750 submissions were received from the public. The Bank also conducted four quarterly regulatory boot camps to help educate and engage with over 500 fintech companies and individuals on the applicable laws and regulations administered by the Bank. The Bank through the Financial Technology Enabler Group (FTEG) continues to engage directly with both the local and international fintech community to deepen understanding of the fintech landscape and uncover opportunities for greater strategic collaboration. Engagements during the year included a high-level seminar organised in collaboration with the Embassy of Sweden and Business Sweden, in addition to a capacity building workshop held with several ASEAN regulators to share Malaysia's experience in developing and operationalising the Sandbox. Going forward, the Bank envisions that greater market integration and strategic collaboration within the region will facilitate market access and enhance the potential for regional mobility of fintech solutions.

Industry collaboration vital in accelerating adoption of technology

The Advisory Committee on Technology for Finance (ACT-Fin), a multi-stakeholder advisory group, was established in August 2017 to advise FTEG on the development of strategic initiatives and accelerate the adoption of technology within the financial services industry. ACT-Fin comprises thought leaders with diverse backgrounds and deep knowledge and experience in banking, payments, consultancy, IT and telecommunications as well as relevant Government agencies with prominent roles in fintech development. The committee will provide technical perspectives relating to new and emerging technologies within the financial sector.

Throughout the year, the Bank collaborated with the industry in the development of identified high-impact initiatives, such as the adoption of a common KYC utility, distributed ledger technology and open application programming interfaces, API. These collaborations identified several priorities for use cases supported by these technologies, including secured data sharing, enhancing customer due diligence and improving efficiency in trade finance. Further policies and road maps in these areas will be published in phases in 2018.

Robust cyber risk management capabilities

The increasing use of technology, while hugely beneficial in terms of efficiency and effectiveness, has also resulted in financial institutions being more exposed to cyber-attacks. One of the key risk mitigation measures in managing cyber risks is conducting regular IT systems penetration testing. In the effort to elevate the standards and rigour of penetration testing, the Bank has facilitated the establishment of an industry working group (Persatuan Penguji Keselamatan Siber Kuala Lumpur, Selangor dan Putrajaya) to develop penetration testing standards for the domestic cyber security industry. These standards will be based on an internationally-recognised certification and accreditation framework developed by the Council of Registered Security Testers, CREST.

To strengthen the Bank's supervisory and response capabilities in relation to cyber risk, the Bank expanded its IT supervision unit during the year. Based on the supervisory unit's onsite reviews on selected financial institutions, risk controls were found to be generally adequate. However, the team also identified weaknesses in the cyber security defence mechanisms of several financial institutions, such as lapses in the detection of suspicious IT activities and untimely implementation of IT security patches. The financial institutions involved were directed to heighten their level of cyber preparedness and implement more effective defence mechanisms.

The Bank continued to work with various counterparts in conducting surveillance and intelligence activities, including financial institutions, government agencies (such as the Malaysian Communications and Multimedia Commission, CyberSecurity Malaysia and the National Security Council) and security practitioners. Where potential cyber threats were detected or actual cyber security incidences had occurred, the Bank issued immediate advisory alerts to financial institutions to ensure prompt mitigation actions are undertaken. In 2017, a total of 15 advisory alerts were issued.

Strengthening Conduct and Culture in the Financial Industry

By Stephanie Tan Yen Li and Katie Lee Sheah Tsan

Introduction

Effective corporate governance by financial institutions is critical to strengthen public trust and confidence in the financial system. Recent instances of conduct failures present a major threat to this continuing trust, as they can be seen as a reflection of underlying weaknesses of governance in financial institutions. Recognising that addressing misconduct calls for a multifaceted approach, a number of regulators have begun to focus on reinforcing ethical and professional behaviour in the financial sector. This article reviews developments in the Bank's approach towards influencing behavioural outcomes in the domestic financial industry, focusing on both contextual and individual factors that can affect behaviour.

The Evolution of Financial Reforms

Approaches to corporate governance have traditionally been characterised by a focus on the strength of systems and processes within financial institutions. Requirements relating to board composition, disclosures and control functions endeavour to ensure that governance structures form sound foundations for effective management of risks within organisations. However, the global financial crisis revealed that failures were also driven by behavioural deficiencies[1].

This has led to a series of corporate governance reforms[2] that form part of the global regulatory reform agenda. In addition to raising the bar with respect to corporate governance arrangements, these reforms also introduce a focus on the behavioural aspect of governance. Of significance are efforts in aligning incentive systems with prudent risk-taking behaviour in financial institutions. While this continues to gain traction, widely publicised cases of retail banking fraud and rigging of key benchmark rates in major financial systems underscore the need for sharper efforts to tackle misconduct risk. Given these developments, authorities are turning their focus to regulatory and supervisory approaches targeted at the root causes of unethical behaviour. To date, two jurisdictions are notably advanced on these fronts (Diagram 1). On a broader level, international efforts are presently being coordinated by the Financial Stability Board to develop a toolkit for supervisors and institutions to address vulnerabilities to misconduct.

Experience suggests that as financial systems become more sophisticated, risks of conduct failure are typically heightened. Therefore, promoting ethical conduct and culture within the financial industry is an objective the Bank shares with the international regulatory community.

Diagram 1

Key Measures to Address Misconduct Risk

Strengthening Individual Accountability (2016)
A regulatory framework to strengthen accountability of individuals
- Regime to hold senior managers to account for misconduct within their areas of responsibility
- Strengthened expectations on fit and proper assessments for key functionaries
- Code of conduct to communicate behavioural expectations

Supervision of Behaviour and Culture (2010)
A supervisory approach to monitor organisational behaviours and culture
- Since 2010, the Dutch National Bank complements its financial supervision of institutions by supervising behaviour and culture

Source: Bank of England, Dutch National Bank

1 The Financial Crisis Inquiry Report, Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States, January 2011.
2 For example, Basel Committee on Banking Supervision: Principles for Enhancing Corporate Governance, Dodd Frank Wall Street Reform and Consumer Protection Act and G20/OECD Principles on Corporate Governance.

The Bank's Approach to Influence Behavioural Outcomes

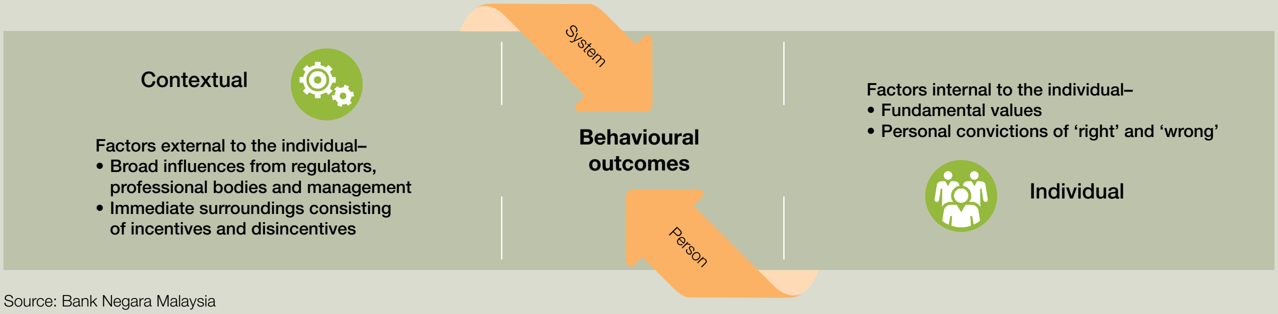
The Bank adopts a two-pronged approach (Diagram 2) to influence the conduct of individuals within the financial sector–

i. cultivate a system that promotes and reinforces the norms of honesty and integrity; and

ii. foster conditions for financial institutions to make informed hiring decisions. This includes improving access to information that is relevant to determine if an individual meets the expected standards of probity for employment in the financial sector.

Diagram 2

Two-pronged Approach to Influence Behavioural Outcomes



Source: Bank Negara Malaysia

The focus on systems alongside individual probity draws from various studies in the field of psychology. Such studies have shown that factors external to the individual (contextual factors) have a significant and important influence on behavioural outcomes. Specifically, systems create behavioural contexts that influence how individuals act in particular situations, often separate from moral or ethical values they may hold[3]. In this perspective, the root of misconduct may not simply be a problem of 'bad apples', but also 'bad barrels' and 'bad barrel-makers'. These findings were similarly reflected in various experiments which suggest that the sphere of influence that an individual is subject to can substantially weaken the norms of honesty and integrity[4]. The system as a whole therefore needs to promote and advocate desired norms for behaviour in the financial industry, to complement the current focus on ensuring key individuals are fit and proper.

Contextual Factors

Contextual factors make up the prevailing culture within which an individual operates. The Bank employs a balance of measures to shape cultural outcomes both across the financial sector and within each institution.

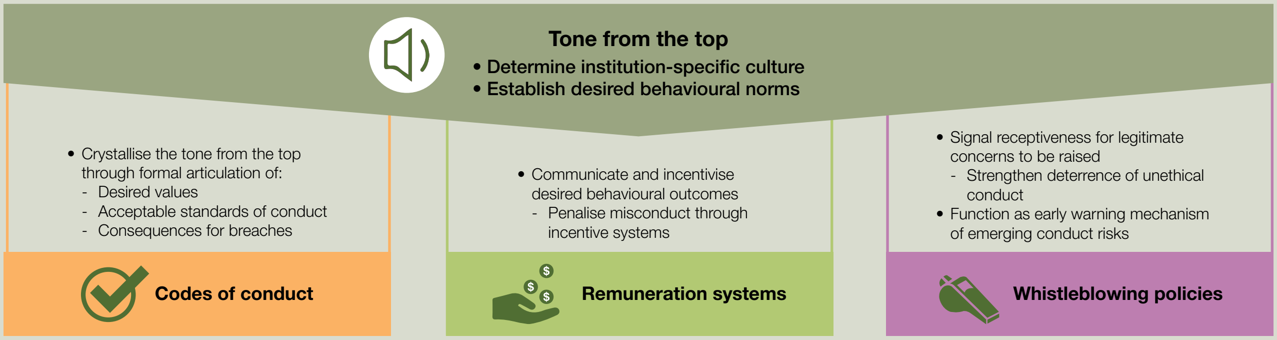
Regulation

Regulations introduced by the Bank formalise its expectations on acceptable conduct for the industry. In the updated Corporate Governance standards issued by the Bank in 2016, the focus on behavioural aspects of governance was strengthened through specific expectations for ethical cultures to be embedded within financial institutions. A key determinant of corporate culture is the tone set by the board and senior management through their decisions, actions and attitudes. On this basis, the standards place a responsibility on the board and senior management to promote a corporate culture which reinforces ethical, prudent and professional behaviours. An important part of this is ensuring that the tone set from the top is reflected in the actions and decisions of middle management as they are more likely to interact directly with the wider population of staff, counterparties and customers. These standards also call for the improved articulation and enforcement of codes of conduct, better alignment of remuneration systems and effective implementation of whistleblowing mechanisms. This is illustrated in Diagram 3.

[3] Zimbardo (2007).
[4] Cohn et al (2014) and Milgram (1963).

Diagram 3

Corporate Governance Enhancements to Strengthen Institutional Culture



Source: Bank Negara Malaysia

Recognising the significance of the board and senior management's influence over organisational culture, the Bank is currently reviewing the allocation of accountability for individuals in these senior roles. The intention is to make it the direct responsibility of those at the helm of institutions to promote a sound organisational culture and address misconduct risk. A discussion paper on Responsibility Mapping, issued in February 2018, outlines the Bank's ideas for clarification of roles, responsibilities and accountability of individuals in senior positions. Precision on the expectations over each senior role will encourage individuals in these positions to take greater ownership of the areas under their purview and set the appropriate tone from the top. A formal consultation on more substantive policy proposals for the framework can be expected in the second half of 2018.

In addition, the Bank has also issued the Code of Conduct for Malaysia Wholesale Financial Markets and Principles for a Fair and Effective Financial Market for the Malaysian Financial Market in April and October 2017, respectively. Collectively, these aim to shape the desired conduct and practices of individuals involved in the financial markets, thus promoting a financial market environment which is trusted and resilient.

Supervision

The Bank, through its supervisory function, also monitors practices and cultural nuances within financial institutions to complement regulatory efforts.

In 2017, the Bank enhanced its internal supervisory framework to incorporate a focus on organisational culture and misconduct risk within financial institutions. This aims to provide added insights as to whether an institution's corporate culture is likely to influence positive or negative behaviours. Components of the supervisory assessment on culture and conduct, and the methodologies, are detailed further in Chapter 2: Banking Sector. It is expected that this framework will be iteratively refined as the Bank further develops its supervisory capabilities to discern cultural and behavioural dynamics.

Enforcement

Effective enforcement additionally serves as a credible deterrent against misconduct, thus contributing towards influencing a positive culture within the industry. As announced last year, the Bank will begin to make public, details of enforcement actions for significant contraventions and breaches from 1 January 2018 onwards. This is intended to strengthen the deterrent effect of enforcement actions.

Industry-led initiatives – Professionalising the industry

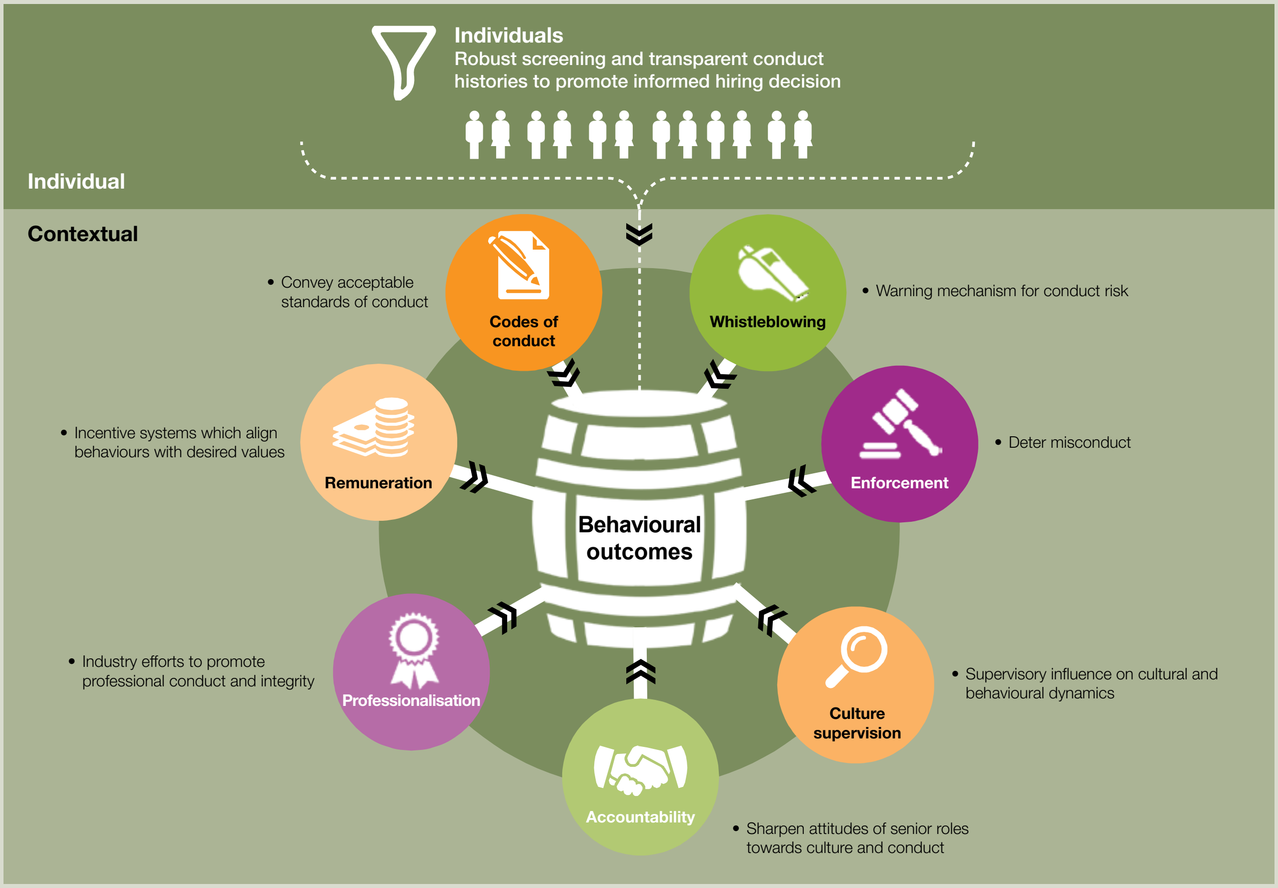
Organisations such as professional bodies play a key role in promoting professional conduct and integrity by current and future members of the financial industry. In this respect, the Asian Institute of Chartered Bankers (AICB) has introduced the Chartered Banker accreditation in 2016. The curriculum accords a significant emphasis, amongst others, on professional ethics. Through a joint declaration with the AICB in 2016, banking institutions have expressed commitment to enrol key employees and board members in this programme. The Bank has also conveyed an expectation for graduates being employed into the banking industry to be members of the AICB, and to complete a mandatory programme on ethics and professional standards. The professional qualifications offered by AICB, not only equip its members with the technical know-how to effectively discharge their functions, but also instil the principles and desired standards for their professional conduct. These efforts complement the work of the Financial Services Professional Board, which expounded a set of principles through the Code of Ethics for the Financial Services Industry, in 2016. Collectively, they contribute to stronger foundations for professional and ethical standards of conduct in the financial sector.

Individual Factors

While contextual factors play a significant role in influencing behaviour, individual (or personal) factors also have a key influence on behavioural outcomes. These factors refer to the beliefs, values and convictions of an individual. A key objective is to uphold uncompromising ethical standards for individuals who work in the financial sector.

Diagram 4

Overview of Contextual and Individual Factors to Influence Behaviour



Source: Bank Negara Malaysia

With this in view, the Bank seeks to strengthen the conditions for informed hiring decisions, and mitigate the recycling of individuals with a history of misconduct between institutions. This is achieved by addressing underlying obstacles to information symmetry, which may compromise a financial institution's ability to determine the probity of individuals it hires. In March 2018, the Bank finalised the standards on Employee Screening. The standards serve to elevate screening practices of financial institutions and improve transparency of an individual's conduct history. Effective 1 July 2018, financial institutions will be required to screen the employment history and criminal records of new hires. On receiving a request for reference information, financial institutions must provide information on an individual's conduct history with the institution. This in turn will place financial institutions in a better position to make informed recruitment decisions.

Conclusion

The strength of public trust and confidence in the financial sector is dependent on observable behaviours of the individuals within it. This underscores the importance of ensuring the highest standards of integrity and professionalism within the Malaysian financial sector, bolstered by a deep and pervasive ethical culture. Garnering the collective efforts and support of those with the capability to influence the environment within which individuals operate is certainly important. As detailed above, the Bank employs regulatory, supervisory and enforcement mechanisms to foster a system that promotes honesty and integrity. More importantly, this must be complemented by corresponding industry efforts to lift professional standards of conduct. In particular, boards and senior management must take decisive steps moving forward to drive cultural changes both within their financial institutions and across the financial sector.

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Financial Sector: Employment Conditions and Preparing the Workforce for the Future

By Ian Lee Wei Xiung and Elysia Lim Fei Ying

Introduction

A driving force of progress in the Malaysian financial system has been its diverse and adaptive workforce. With globalisation and technological advancements having a profound impact on the global value chain, productivity, and consequently jobs, this article examines: (i) current employment trends in the Malaysian financial sector[1]; (ii) emerging developments within the financial sector workforce; and (iii) implications and strategies for workforce planning and talent management going forward.

State of the Industry: Key Highlights and Observations on Employment Trends

Positive job creation and hiring appetite by financial institutions

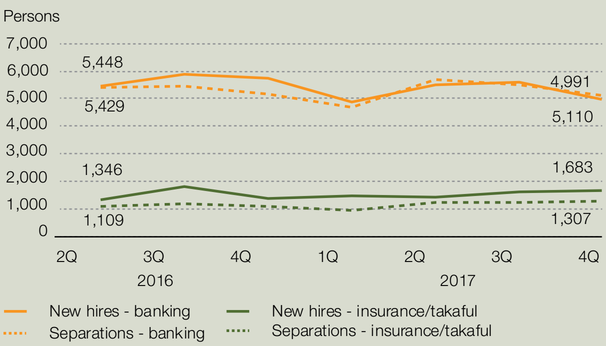
Net hiring trends by the financial sector have been positive in recent years (Chart 1). At end-2017, 164,884 were employed by the financial sector, with Malaysians comprising a significant majority of the workforce (99.6%). Over the past three years (2015-2017), a total of 24,630 jobs were created, of which 90.6% constituted high-skilled positions[2] (Chart 2). Layoffs and discharges remained low, averaging only 7.5% of total separations[3] in 2017 (Table 1), indicating largely voluntary movements due to retirement, resignations and transfers. Over 75% of jobs created in 2017 were filled within the year, with over 80% of these jobs filled within six months. Looking ahead, the trend for job creation is expected to remain positive, with both banks and insurers/takaful operators expecting additional jobs to be created in 2018.

Broad-based movement towards a high-skilled workforce

Another key development observed is the shift in composition of the workforce towards high-skilled workers in the last three years. As at end-2017, high-skilled workers comprised 74.4% of banking sector employees (2015: 69.1%) and 83.4% of insurance/takaful sector employees (2015: 79.1%) (Chart 3). This significantly exceeds the national average for total employment in Malaysia, where only 27.2% of employed persons are within the high-skilled worker category. A more detailed analysis on the ongoing and future implications of a movement towards a high-skilled workforce is further discussed in the later part of this article.

Chart 1: New Hires against Separations

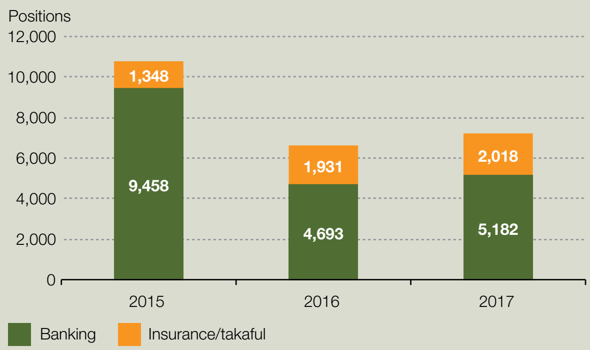
Hiring trends remain stable



Source: Bank Negara Malaysia

Chart 2: New Jobs Created

Sustained job creation



Source: Bank Negara Malaysia

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1 Unless otherwise specified, the financial sector comprises banks (commercial banks, investment banks, Islamic banks, international Islamic banks and development financial institutions), insurers and takaful operators.

2 Positions are categorised based on the Malaysian Standard Classification of Occupations 2013 (MASCO 2013). For the financial sector, high-skilled positions are those within the Managers, Professionals and Technicians and Associate Professionals groups specified in the MASCO 2013. Mid-skilled positions are those within the clerical occupations and operative workers group, while low-skilled positions are those within the elementary workers group.

3 Separations comprise the following sub-categories: (i) Quits/resignations (excluding retirements); (ii) Layoffs and discharges; and (iii) Other separations (retirements, transfers to other locations, deaths or separations due to employee disability).

Cross-Sector Developments

Table 1

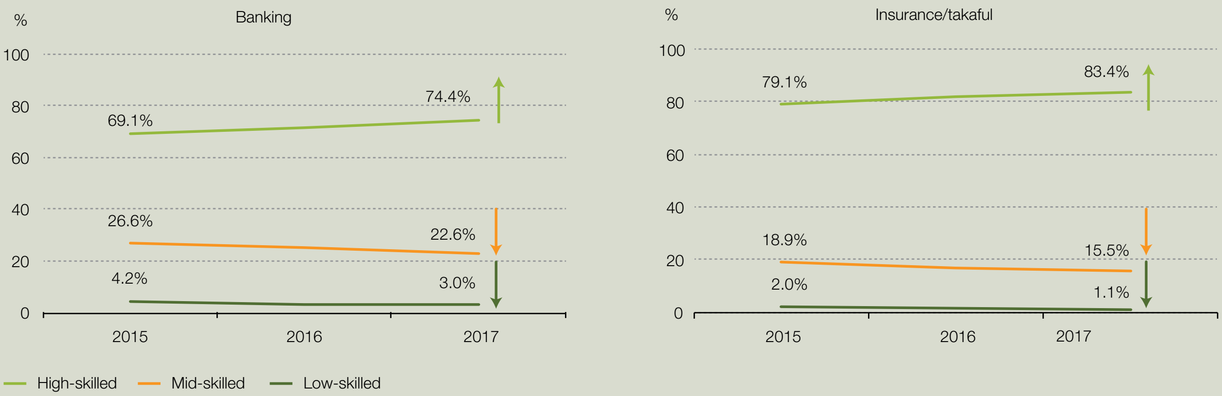
New Jobs Created against Layoffs and Discharges in 2017

	1Q 2017	2Q 2017	3Q 2017	4Q 2017
NEW JOBS CREATED				
Banking	**1,753**	**1,220**	**1,482**	**727**
High-skilled	1,721	1,160	1,403	657
Mid-skilled	29	57	79	69
Low-skilled	3	3	0	1
Insurance/takaful	**556**	**525**	**494**	**443**
High-skilled	552	519	492	438
Mid-skilled	3	6	2	5
Low-skilled	1	0	0	0
LAYOFFS AND DISCHARGES				
Banking	**193**	**284**	**311**	**664**
High-skilled	169	226	269	402
Mid-skilled	18	53	37	224
Low-skilled	6	5	5	38
Insurance/takaful	**158**	**137**	**80**	**111**
High-skilled	73	55	28	56
Mid-skilled	85	77	52	55
Low-skilled	0	5	0	0

Source: Bank Negara Malaysia

Chart 3: Employment by Skills

Broad-based upskilling of the workforce



Source: Bank Negara Malaysia

Proportional growth in productivity and median salary

Consistent with the shift towards a more high-skilled workforce, salaries in the financial sector have continued to increase. Over the 2011-2016 period, the real median salary in the financial sector[4] grew at a Compounded Annual Growth Rate (CAGR) of 1.8% a year, broadly in line with growth in the sector's labour productivity[5], which expanded at a CAGR of 1.7% a year over the same period. In comparison to other industries, salaries in the financial sector remain supported by relatively high levels of productivity (Table 2).

[4] Real median salary is derived from adjusting the median salary for the financial sector by the Consumer Price Index (Source: Department of Statistics Malaysia). For the calculation of salaries and productivity within this sub-section, the financial sector includes banks (commercial banks, investment banks, Islamic banks, international Islamic banks and development financial institutions), insurers and takaful operators as well as capital market service operators and other financial providers.

[5] Measured by real value-added per worker.

Table 2

Real Median Salary and Productivity of Selected Economic Activities in 2016

Economic Activity	Monthly Real Median Salary (RM)	Annual Real Value-added per Worker (RM)
Mining and quarrying	3,168	1,134,476
Information and communication	3,038	294,998
Financial and insurance/ takaful activities	2,648	201,224
Manufacturing	1,389	106,413
Construction	1,354	39,225
Wholesale and retail trade, repair of motor vehicles and motorcycles	1,302	67,395
Agriculture, forestry and fishing	1,042	51,264
Accommodation and food and beverage services activities	1,007	26,373

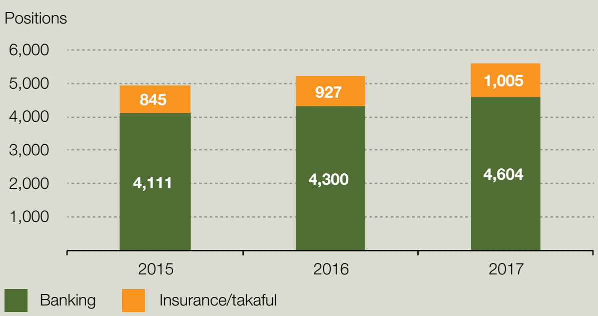
Source: Department of Statistics Malaysia

There are some remaining job vacancies despite positive overall hiring appetite

Despite positive overall hiring trends by the financial sector, job vacancies remain at over 5,600 (Chart 4), with high-skilled positions consistently accounting for more than 80% of total job vacancies over the past three years. Based on a survey conducted by the Bank, a majority of job vacancies (over 3,500 positions) were high-skilled positions within the commercial banking sector as at end-September 2017. Among these, high-churning business functions, such as sales and marketing have the largest number of vacancies (33%, 1,185 positions), while highly-specialised functions such as risk management, legal, compliance, project management and credit management were the second largest group (15%, 509 positions). More than 75% of these job vacancies in the commercial banking sector were for entry-level or experienced technicians and associate professionals, indicating strong industry-wide demand for junior- to mid-level employees in high-skilled business functions. Commercial banks cited that the limited number of candidates with the necessary qualifications, exposure and knowledge was among the key challenges faced in filling the vacancies. The evolution of job requirements within the highly-specialised functions underscores the need to focus not only on the absolute supply, but also the quality of supply to meet industry demand for higher-skilled talent.

Chart 4: Job Vacancies

Some job positions remain vacant



Source: Bank Negara Malaysia

Cross-Sector Developments

An Evolving Workforce: Trends and Developments Shaping the Future Landscape

The above observations highlight important shifts in job creation, hiring trends and workforce composition that are taking place amid the changing financial landscape. Looking ahead, several factors will be key in shaping the workforce needs of the Malaysian financial sector (Diagram 1). In particular, these factors include the pervasive impact of technology on both business strategy and processes, higher and more complex demands from the ongoing regulatory reforms, expanding cross-border operations and changes in consumer interactions.

Diagram 1

Driving Factors Shaping the Future Workforce Needs of the Malaysian Financial Sector

Fintech Innovation

- Emerging demand for fintech-driven job competencies and positions:
  - ✓ Data analysts to implement strategies for harnessing revenue-generating information
  - ✓ Cybersecurity experts to strengthen information security safeguards
  - ✓ Technical specialists to develop internal competencies such as blockchain and machine learning to facilitate financial innovation
- Impetus for mass upskilling in staff digital proficiency to adapt to increasing task automation, digitalisation and re-engineering of business processes

Regulatory Reforms

- Strengthening of audit, compliance and risk management functions to meet developments in international regulatory standards
- Demand for specialists to support ongoing market reform adjustments (e.g. liberalisation of motor tariff and diversification of distribution channels)

Deepening Regional and International Integration

- Internationalisation of knowledge and competencies to facilitate talent mobility as financial institutions expand regionally
- Understanding of local markets and preferences for the effective delivery of financial services in other countries

Shifts in Consumer Demographics and Preferences

- Increasing demand for development of financial products that are responsive, predictive and tailored to individual lifestyles, catalysed by enablers such as big data analysis
- Transformation in the role of branch services from transaction facilitation to high value-added financial advice and services that support a more matured, urbanised and financially-savvy population

Source: Bank Negara Malaysia

Over the coming years, the confluence of these factors is likely to see new jobs being created within the high-skilled category, accompanied closely by shifts in the role and scope of existing job positions. In particular, technological advancements are expected to expand job opportunities in several key areas, including to support:

(i) Process streamlining: In a more digitalised society, greater demand will be created for specialised skills to drive continuous process re-engineering to increase efficiencies while delivering superior service;

(ii) Data analytics: Big data will play a crucial role in expanding business opportunities and managing risks. Financial institutions will need to be able to examine and process large and varied data sets that will increasingly drive decisions;

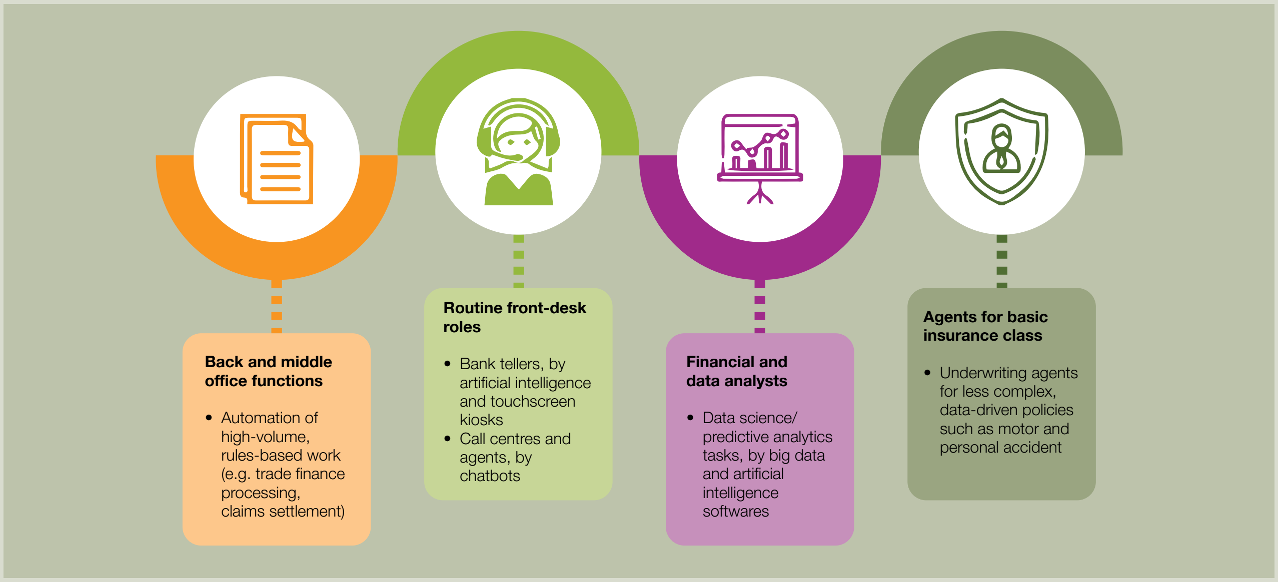
(iii) Cybersecurity management: As increasing amounts of sensitive information migrate from paper to cloud, information security will be a paramount concern; and

(iv) Regulatory and legal compliance: Increasing regulatory complexity will shift greater demands onto technology to support compliance, with risk management, compliance and finance officers taking on more strategic roles in recovery planning, governance, communications and advocacy and organisational development.

The broad reach of digital platforms and changes in consumer preferences have further accelerated changes in the delivery of financial services, replacing physical branch access with mobile- and internet-based connectivity for performing financial transactions. In 2017, banks onboarded over 5.3 million online and mobile banking customers, and notified the Bank of 36 branch closures, broadly in line with declining transaction volumes at these bank branches. While these technological advancements have enabled financial institutions to be more agile and responsive to consumer preferences and a changing competitive landscape, they also herald an irreversible change in the future composition and skillsets of the financial sector workforce (Diagram 2).

Diagram 2

Types of Jobs and Roles at Risk of Technological Displacement



Source: Bank Negara Malaysia

With a significant majority of jobs in the high-skilled category, technology is more likely to augment and redefine job roles in the financial sector, rather than eliminate occupations altogether over the next decade. The effects of automation will also likely be heterogeneous. Like periods of significant technological advancements in the past, the impact across jobs, worker segments and institutions will be uneven despite overall benefits to society from increased productivity, wages and innovation. In line with trends observed in other advanced countries, the gradual displacement of largely manual and more routine lower value jobs will continue. In Malaysia, the number of low- and mid-skilled workers declined at a CAGR of 16.9% and 8.2% respectively over the past three years. Nevertheless, the proportion of low- and mid-skilled workers in Malaysia's financial sector remains sizeable at 24%.

Building the Workforce of the Future: Priorities Moving Forward

These developments bring into greater focus several priorities for preparing the financial sector workforce for the future, which include:

- Equipping the workforce with new skillsets that are relevant and practical for the needs of the future. In line with a heightened focus on professionalism as part of ongoing regulatory reforms, this also entails the raising of professional standards and ethical conduct in the workforce;
- Supporting the transition of the workforce through re-training and outplacement assistance as job functions evolve; and
- Expanding the innovative capacity of the workforce to facilitate future growth, particularly through enhancing data capabilities and workforce diversity.

According to a report by the World Economic Forum, the most in-demand occupations in many industries today did not exist ten or even five years ago[6]. The report also quotes that an estimated 65% of children entering primary school today will ultimately end up working in completely new job types that are yet to exist. The potential disruption that this reality presents is significant. While it is difficult to fully anticipate how job markets will evolve in the medium to long term, it is critical to ensure that strong institutions, arrangements and standards exist to support inevitable adjustments in the financial sector workforce. A number of important initiatives are being pursued by the Bank and the financial industry to this end:

a) **Strengthening core competencies and raising professional standards**

The demand for new technical or critical skillsets by the industry calls for strong foundations in core competencies that are continuously updated, and conduct that consistently reflects a commitment to high professional standards. This is being supported by:

(i) Expectations for key personnel in critical job functions in the banking sector to acquire the appropriate specialised qualifications beginning 2018. This covers the areas of credit, compliance, Anti-Money Laundering and Counter Financing of Terrorism, risk management and audit;

(ii) Continuing progress towards increasing the number of Chartered Bankers among the senior management and boards of banking institutions as part of a broader initiative to professionalise the Malaysian banking industry;

(iii) Requirements introduced for reporting submissions made by commercial banks to Bank Negara Malaysia to be undersigned by a Chartered Banker beginning 2021. Similar requirements are also contemplated for the Islamic banking and insurance/takaful sectors;

(iv) Mandatory accreditation of compliance officers in the money services business sector (further details provided in this Chapter), in collaboration with the Financial Accreditation Agency and Department of Skills Development;

(v) Requirements for Shariah committee members and key Shariah personnel to attain Shariah certifications such as the Certified Shariah Advisor and Certified Shariah Practitioner to be eligible for appointment; and

(vi) Transformation of key professional training and education institutions for Islamic finance and insurance/takaful to strengthen their capacity to meet new demands and maintain high professional standards for the workforce. This includes the reconfiguration of existing institutions and consideration of sustainable funding arrangements to support key reforms.

b) **Developing mechanisms to support re-skilling and workforce transition**

While the overall objective is to promote upskilling across the entire financial sector workforce, certain segments, whether by choice or compatibility, will inevitably face the risk of displacement. To mitigate this risk, it is thus important to ensure arrangements are in place to increase workforce mobility and facilitate orderly job transitions. This includes:

(i) Improving the availability of information on the types of jobs that may be at risk of displacement and projections of the number of jobs likely to be displaced;

(ii) Identifying new complementary or adjacent job positions that are relevant to the existing skillsets and roles of job segments at risk of displacement; and

(iii) Providing for an explicit and sustained focus within business plans on strategies to address the transition of staff into new roles, whether within or outside the institution.

Based on the Bank's findings, while some elements of these mechanisms exist within the industry, over 60% of commercial banks, insurers and takaful operators will benefit from having a more comprehensive approach towards workforce transition. The Bank aims in 2018 to work with financial institutions to conduct a holistic assessment of the dynamics of the financial sector workforce, including forecasting skill demand and supply, with the end objective of developing appropriate supporting mechanisms to facilitate workforce transition.

c) **Diversifying the talent pool**

Over the years, a more diverse finance talent pool has emerged, reflecting an increasing openness of financial institutions to new perspectives, ideas and expertise from non-traditional practices or backgrounds to improve business processes and capture new opportunities. As at end-2017, close to a half of new hires employed in the financial sector were from academic backgrounds outside the traditional fields of finance, accounting, economics, business and actuarial science.

[6] World Economic Forum (2016), 'The Future of Jobs' Report.

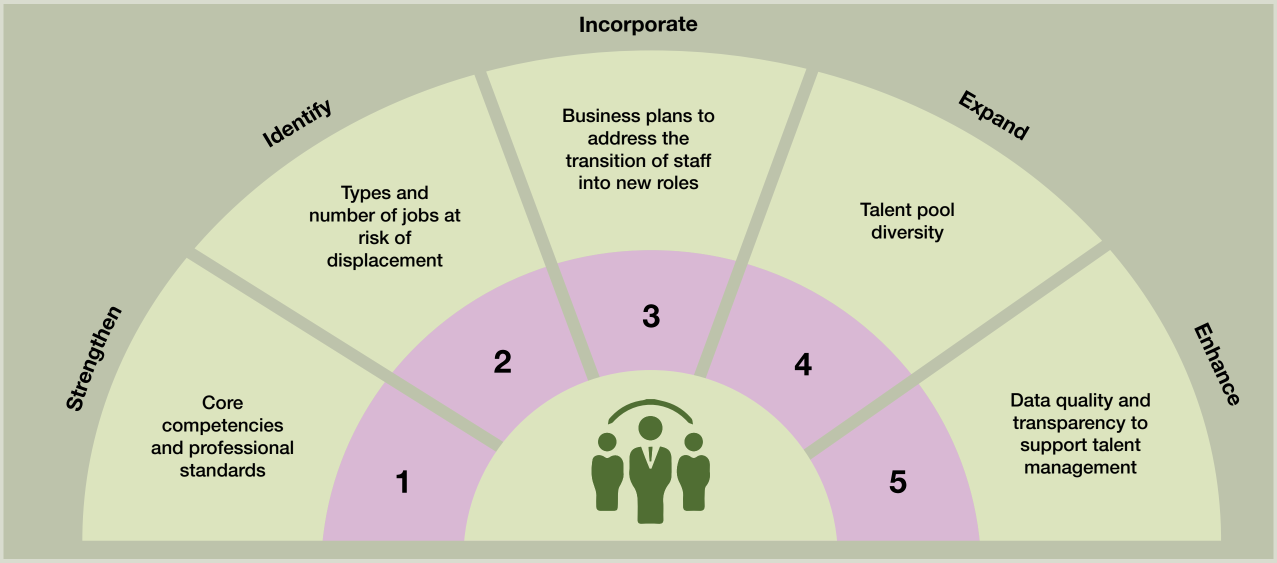
Efforts continue to be pursued to build and diversify the talent pipeline. Intakes to the Financial Sector Talent Enrichment Programme have been expanded to include candidates from new and diverse disciplines. This will be further complemented by the development of a 'Fit-for-Work Programme (FFW)', which is expected to commence in 2018. FFW is a 9-month technical training and placement programme that aims to provide valuable exposure to unemployed graduates in the financial sector, thereby improving their job prospects, while at the same time allowing financial institutions an opportunity to tap into a source of potential talent that may not normally be identified through more common recruitment channels. The programme will build on a combination of selected industry-run training platforms, on-the-job experience and massive open online courses (MOOCs) to help reduce the issue of skills mismatch of graduates and facilitate employment by the financial sector.

d) Enhancing data to support talent management and development

To improve market signalling and reduce information asymmetries for both job seekers and training providers, the Bank published the first set of financial sector workforce data in August 2017. The Bank will continue to enhance the reporting system, including the data structures, with the aim of improving the accessibility and quality of labour market statistics. This will better enable industry players to forecast future talent needs and required skillsets, while supporting industry training providers in the development of more customised programmes. The establishment of the Malaysia Bureau of Labour Statistics is also expected to facilitate more accurate and timely comparison of labour market information between the financial sector and other industries.

Diagram 3

Imperatives for Building the Financial Sector Workforce of the Future



Source: Bank Negara Malaysia

Conclusion

Current trends in the financial sector workforce are indicative of a trajectory towards becoming more technology-intensive and knowledge-driven. This transition has the potential to be highly disruptive in a way that could undermine the broader benefits from a more productive and higher-skilled workforce, unless institutional and industry arrangements are well positioned to not only manage the transition, but enable it by increasing the agility of our workforce. Some of the ways to achieve this are outlined in this article and will continue to be an area of focus going forward to better prepare the workforce for the emerging needs of the future.

References

World Economic Forum (2016), 'The Future of Jobs' Report.

Payment and Settlement Systems

Payment and Settlement Systems

PROMOTING THE STABILITY OF PAYMENT AND SETTLEMENT SYSTEMS

Continued resilience and reliability in RENTAS operations

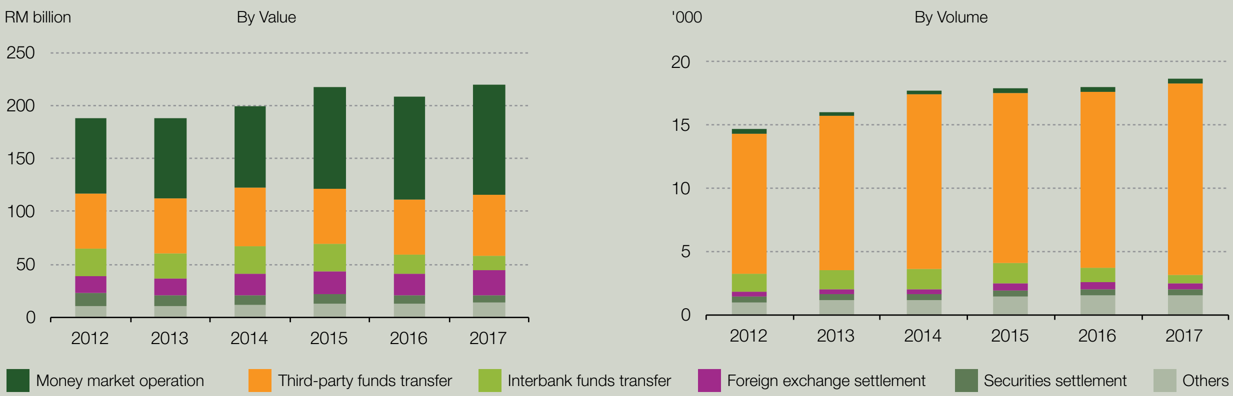
The Real-time Electronic Transfer of Funds and Securities System (RENTAS) facilitates multi-currency real-time gross settlement of interbank funds transfers and securities settlement. During the year, a total of 4.6 million transactions amounting to RM53.7 trillion were settled in RENTAS, which was 40 times of Malaysia's gross domestic product (GDP). This represents an annual growth of 2.3% and 4.3% in total volume and value, respectively. Similarly, the daily average transaction volume increased by 3.5% to 18,651 (2016: 18,013) while the value increased by 5.6% to RM220.3 billion (2016: RM208.7 billion) in 2017 (Chart 6.1).

RENTAS achieved 100% system uptime in 2017, above the target level of 99.9%. With the implementation of the New RENTAS in September 2016, further progress was made to support cross-border payment services. Key to this was the introduction of multi-currency settlement functionalities and the adoption of the Society for Worldwide Interbank Financial Telecommunication (SWIFT) messaging standards under the New RENTAS. These enhancements facilitated greater levels of automation and standardisation across RENTAS participants and in turn improved participants' Straight-Through-Processing (STP) rate of outgoing RENTAS transactions by an average of 33.6%. The New RENTAS also enhanced the submission of Renminbi transactions in RENTAS by supporting new access channels and a more seamless process for participants.

During the year, financial institutions completed a self-assessment of security systems as required by the Bank as part of ongoing efforts to mitigate cyber risks to payment system infrastructures. The exercise also served to identify and address key gaps ahead of the implementation timeline for SWIFT's mandatory security controls. These controls include measures to heighten the physical

Chart 6.1: RENTAS – Daily Average Transactions

Marginal increase recorded in RENTAS average daily transactions



Source: Bank Negara Malaysia

and technical security of SWIFT-related infrastructure, improve access controls through strong authentication methods, and enhance the response planning to system disruptions. Drawing on the key issues identified from the exercise, the Bank required financial institutions to formulate action plans to ensure a smooth and timely implementation of the security practices. As at end-January 2018, all but one financial institution attested compliance with the relevant mandatory security controls. The remaining institution is expected to comply by end-2018.

Retail payment systems remained stable without major disruptions

Retail payment systems[1] functioned smoothly throughout 2017, with high system availability above the target level of 99.9%. Interbank GIRO (IBG) and Instant Transfer transactions continued to grow rapidly in value (IBG: 21.3%; Instant Transfer: 60.7%) and volume (IBG: 13.0%; Instant Transfer: 59.4%). Cheque transactions continued to decline by 3.2% in value and 10.6% in volume, in line with the sustained momentum in migration to credit transfer[2] services. Amid the increase in transaction volume, Payments Network Malaysia Sdn. Bhd. (PayNet) introduced additional measures to mitigate settlement risk and streamline recovery processes to ensure the reliability of the Instant Transfer system. These measures complemented the broader range of initiatives rolled out since 2015 to strengthen the resilience of the Instant Transfer system, including upgrades to the network infrastructure and introduction of an additional interbank settlement window.

The Bank continues to closely monitor cross-border retail payments amid the entry of new players, namely issuers of payment instruments based outside Malaysia using Quick Response (QR) codes at Malaysian merchants. During the year, there were 0.8 million payment transactions valued at RM228.5 million made using foreign-issued QR code mobile payment services at Malaysian merchants. As such operations commenced only from the second quarter of 2017, the transaction volume and value of such payment services remained low at 3.4% and 2.0%, respectively, of the transaction volume and value of foreign-issued credit and charge cards used in Malaysia. However, such transactions are expected to increase more rapidly going forward as mobile payments continue to gain traction as a convenient mode of payment.

The use of foreign-issued mobile payment services entails specific risks associated with the timely settlement of funds by foreign issuers. These risks are mitigated through requirements imposed by the Bank for local acquirers that facilitate foreign-issued mobile payment instruments to provide full funds settlement to merchants in the event that a foreign issuer defaults on its settlement obligations. Where SME merchants are acquired, non-bank acquirers are required to establish a trust account to deposit funds that can only be used for making payment to their SME merchants.

Strengthened security and efficiency through payment card infrastructure enhancements

The payment card infrastructure in Malaysia continues to be strengthened, underpinned by a two-pronged approach. This entails: (i) migrating from signature to Personal Identification Number (PIN) verification under the Chip and PIN initiative; and (ii) the adoption of Europay-Mastercard-Visa (EMV) standard and contactless functionality for the domestic debit card scheme as provided by the Malaysian Chip Card Specification (MCCS) initiative. Collectively, this approach has contributed towards strengthening the security, interoperability and efficiency of payment card transactions.

On 1 July 2017, the industry successfully completed the migration from signature to PIN-based payment cards. Cardholders are now required to enter a six-digit PIN to authenticate payment card transactions at all point-of-sale (POS) terminals. This serves as a pre-emptive measure to combat lost and stolen card fraud. Prior to the effective cut-over date, a six-month transition period was observed where cardholders were allowed to bypass the PIN requirement if they did not remember their PIN. This was accompanied by extensive public awareness and education initiatives to encourage the adoption of PIN for payment card transactions. These initiatives contributed to the significant decrease of the PIN bypass rate[3] from 84% in September 2016 to a negligible level of 3% by the cut-over date, thereby ensuring minimal disruptions to payment transactions using locally-issued payment cards (Chart 6.2).

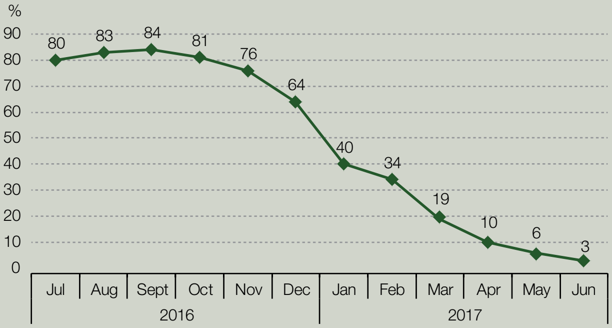
1 Interbank GIRO (IBG), Instant Transfer, Financial Process Exchange (FPX), Direct Debit (DD) and the National Electronic Bill Payment Scheme (JomPAY).

2 Credit transfers refer to payment services that allow a payer to instruct the institution, with which the payer's account is held, to transfer funds to a beneficiary. In Malaysia, these include IBG and Instant Transfer services.

3 The rate at which transactions were completed by signature during the six-month transition period.

Chart 6.2: PIN Bypass Rate

Progressive decline in PIN bypass rate ensured a smooth migration to PIN-based cards



Source: Bank Negara Malaysia

The MCCS initiative also saw the industry-wide introduction of secure contactless debit cards. Given that contactless payments are relatively new in Malaysia, debit and prepaid cardholders are provided with the option of reducing the default transaction limit for contactless payments, namely the maximum amount that a cardholder can transact without the need to sign or enter a PIN. Cardholders can also elect to switch off the contactless functionality altogether, if desired.

Payments fraud remained low

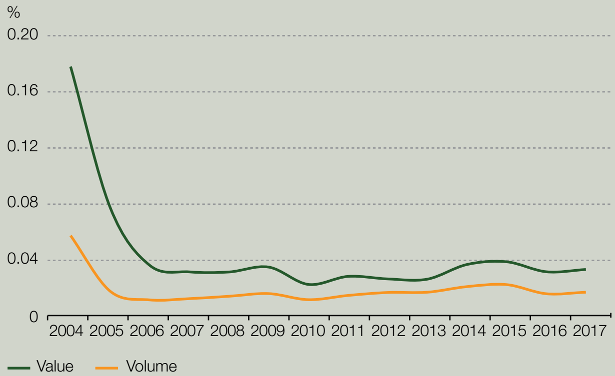
In 2017, payment card[4] fraud losses marginally increased to 0.0197% of total transaction volume (2016: 0.0186%) and 0.0355% of total transaction value (2016: 0.0339%) (Chart 6.3). Card-not-present (CNP) fraud such as unauthorised online transactions accounted for 92.8% of the total fraud cases and 89.2% of the total fraud losses. The bulk of the fraud losses (92.5%) were borne by foreign entities, based on rules that shift the liability to parties that have yet to implement a strong authentication method, which requires cardholders to enter a one-time password to authorise online transactions. Losses to cardholders were therefore minimised as a result of stronger authentication methods adopted in Malaysia. Following the full implementation of the Chip and PIN initiative effective 1 July 2017, lost and stolen card fraud declined further in the second half of 2017 to 0.0009% of transaction volume and 0.002% of total transaction value (January to June 2017: 0.0013%; 0.003%).

Online banking fraud in Malaysia remained low at 0.0004% as a share of total transaction volume (2016: 0.0003%) and 0.0003% as a share of total transaction value (2016: 0.0002%) (Chart 6.4).

[4] Payment cards consist of credit cards, debit cards and charge cards.

Chart 6.3: Payment Card Fraud as a % of Total Transactions

Payment card fraud remained low supported by adoption of robust security measures



Source: Bank Negara Malaysia

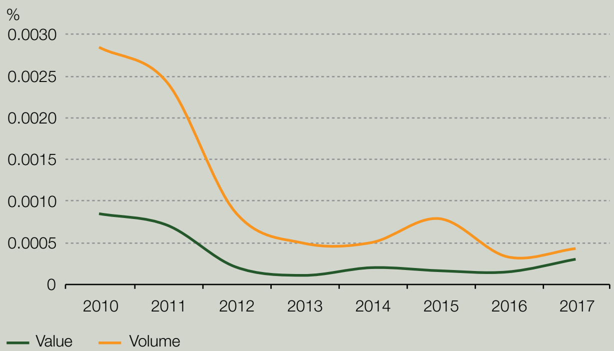
Fraud cases for retail transactions increased marginally to 0.0006% and 0.003% of total retail transaction volume and value, respectively (2016: 0.0004%, 0.002%). Phishing, where online banking users are lured into disclosing confidential banking information through phone calls, SMS or e-mails, continued to be a key *modus operandi*, accounting for 70.9% (2016: 86.4%) of total online banking fraud cases.

Retail fraud for online banking remained low in Malaysia at 0.0006% and 0.003% of total transaction volume and value, respectively

The Bank maintained regular engagements with the industry to ensure that consumer education

Chart 6.4: Online Banking Fraud as a % of Total Transactions

Online banking remained resilient against fraud



Source: Bank Negara Malaysia

and awareness measures remain effective and adequately address evolving modus operandi such as unauthorised online banking registration. An emphasis on the responsibility of online banking users to keep banking credentials safe and to be alert to scams continued to be a central theme of consumer education initiatives.

KEY TRENDS AND DEVELOPMENT IN RETAIL PAYMENT SYSTEMS

Continued progress in meeting e-payment targets

Progress continues to be made towards achieving the e-payment targets set out in the Financial Sector Blueprint 2011-2020. To foster an enabling environment for an accelerated migration, the Bank's efforts remain centred on correcting price signals to make e-payments more affordable, establishing market incentive structures to sustain continuous investments in e-payment infrastructure and services, and promoting greater awareness and confidence in the use of e-payments. This is anchored on a strategy of promoting credit transfers to displace cheques and encouraging the wider adoption of debit cards to displace cash. Looking ahead, mobile payments are also expected to play a key role in displacing cash and cheques, particularly for smaller merchants and transfers between individuals, due to advantages in terms of cost and convenience.

Mobile payments are expected to complement debit cards and credit transfers to accelerate the displacement of cash and cheques

The Bank has been gradually implementing reforms in three broad waves to enhance Malaysia's e-payment infrastructure (Diagram 6.1).

Since 2013, the Pricing Reform Framework has corrected price distortions between cheques and credit transfer services. The framework capped the costs of credit transfer services and introduced a cheque processing fee. This was supplemented by the ePIF, under which banks chanelled cheque fees back to their customers as incentives for the adoption of e-payments. These developments, coupled with the disclosure requirements introduced since 2014, have spurred competition among banks to improve their product offerings and attract customers to sign up as online banking users via various fee waivers

Diagram 6.1

Three Waves of e-Payment Transformation in Malaysia

	First Wave (2013)	Second Wave (2015)	Third Wave (2018)
Enablers	Credit transfers accessible to 99.9% of current and savings accounts	40.1 million debit cards for a 30.7 million population (end-2014)	Estimated 42.4 million mobile phone subscriptions (70% smartphones)[5] for a 32.1 million population (end-2017)
Challenges	Price distortion between cheques and credit transfers	• High MDR[2] • Moderation in POS terminal growth	Estimated 12 million adults without online banking services
Initiatives	**Pricing Reform Framework and ePIF[1]** • IBG (maximum fee of 10 sen) • Instant Transfer (maximum fee of 50 sen) • Introduction of cheque fees and ePIF	**PCRF[1]** • Ceilings for interchange fees[3] • Establishment of MDF[4] • Implementation of Chip and PIN	**ICTF[1]** • Open and fair access to shared payment infrastructure for banks and eligible non-banks • Account reachability through common identifiers • Interoperable QR scheme and common QR code

1 Refers to e-Payment Incentive Fund (ePIF), Payment Card Reform Framework (PCRF) and Interoperable Credit Transfer Framework (ICTF)
2 Merchant Discount Rate (MDR) is a fee paid by a merchant to an acquirer for facilitating a payment card transaction
3 Interchange fee is a fee payable by an acquirer to an issuer in a payment card transaction. Interchange fee is priced into the MDR charged by an acquirer to a merchant
4 The Market Development Fund (MDF) was established by two major payment card schemes in 2015, which is expected to channel approximately RM455 million in funds from interchange fees towards expanding the POS terminal network over the period from July 2015 to 2020
5 Based on a recent survey conducted in the third quarter of 2017 (Internet Users Survey 2017)

Source: Bank Negara Malaysia, Department of Statistics, Malaysia and Malaysian Communication and Multimedia Commission and incentives. The number of active online banking users with at least one transaction per month correspondingly increased by 82.1% from 7.0 million users in 2013 to 12.7 million users in 2017.

The implementation of the PCRF in 2015 also addressed distortions in the payment card market. Notably, the framework curbed indiscriminate hikes in interchange fees and introduced measures to enhance transparency and competition, supported by the establishment of the MDF to accelerate the POS terminal network expansion. This has facilitated a continued decline in MDR, thereby making payment cards increasingly affordable for merchant segments that may have been priced out prior to the PCRF. At the same time, competition among banks has led to an expansion in the network of POS terminals with banks offering lower MDR to merchants.

These reforms have contributed to an upward trajectory for overall e-payment usage (Table 6.1). Since 2011, the number of e-payment transactions per capita has more than doubled to 111 transactions per capita in 2017, while cheque usage has declined by 41.9% to 119.0 million. Over the same period, the number of POS terminals increased by 96.2% to 407, 111 terminals or 13 POS terminals for every 1,000 inhabitants. Debit card transactions have also increased by more than six times to 162.3 million transactions or five transactions per capita.

The Bank anticipates some challenges in achieving the targets for POS terminals and debit card transactions by 2020. Although the continued decline of MDR has spurred the acceptance of debit cards, accelerating growth within the next three years is likely to be more challenging. Notably, the interchange fee ceiling for credit cards, which currently stands at between 0.94%

Table 6.1

Progress Made in Achieving the Financial Sector Blueprint Targets

Payment indicators	2011	2017	2020 Target
E-payments per capita	49	111	200
Cheques cleared (million)	205	119	100
Payment card terminals (per 1,000 inhabitants)	7	13	25
Debit card transactions per capita	1	5	30

Source: Bank Negara Malaysia

to 1.04%, will only be lowered to the eligible cost level of 0.48% in 2021. As such, the average MDR remains relatively higher for credit cards (1.33%) compared to debit cards (0.56% for MyDebit; 0.89% for the international debit networks). For some merchants, this may continue to be a barrier to accepting payment cards. Additionally, certain market segments, such as lower-tier merchants who are more cost-sensitive, may continue to prefer to accept cash, which is often perceived to be cost-free despite the hidden economic costs.

Consequently, the third wave of the Bank's reforms will focus on mobile payments to complement debit cards in displacing cash in Malaysia. Of note, greater cost effectiveness may be achieved through QR payments, which reduce the need for POS terminals. In addition, mobile payments serve as a convenient channel for an estimated 12 million adults to adopt digital payments (of Malaysia's 24 million adults, 10 million are bankable, but are not online banking users and two million are unbanked). The issuance of the ICTF by the Bank in 2018 will serve as a catalyst to expand the reach of mobile payments by facilitating the interconnectivity between bank accounts and electronic money (e-money) accounts in Malaysia via a shared network (refer to 'Mobile payments to complement debit cards in displacing cash' in this Chapter for more details).

As payment technologies continue to evolve, the regulatory framework will remain technology-neutral and supportive of innovations that promote greater efficiency, security and reliability in Malaysia's e-payments landscape.

The regulatory framework continues to be supportive of innovations in Malaysia's e-payments landscape

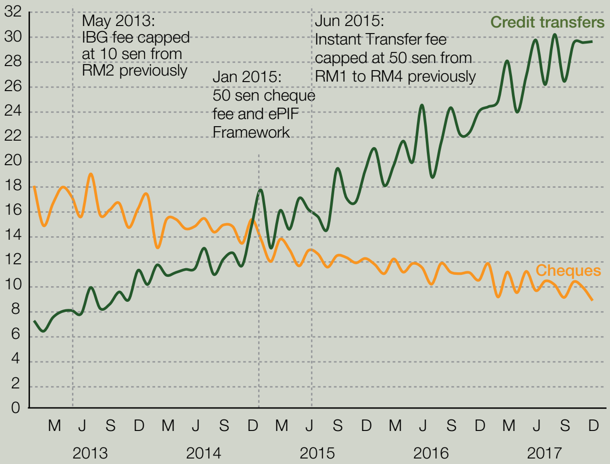
Increase in the adoption of credit transfers to displace cheques

In 2017, cheque usage continued to register a double-digit decline of 10.6% to 119.0 million cheques (2016: -10.0%; 133.1 million). IBG and Instant Transfer continued to gain traction in displacing cheques, with an annual growth of 27.9% to 328.6 million transactions in 2017 (2016: 31.2%; 256.9 million), surpassing the cheque volume by 2.8 times (Chart 6.5).

Cheques remain a costly payment instrument. The average unit cost incurred by banks for processing cheques had steadily increased from RM3.00 in 2011 to

Chart 6.5: Transaction Volume for Cheques and Credit Transfer

The volume of credit transfers surpassed cheques by 2.8 times in 2017



Source: Bank Negara Malaysia

RM4.00 in 2016. Businesses also incur an estimated cheque handling cost of RM6.80, based on a recent survey of 89 companies. These costs are expected to rise further going forward.

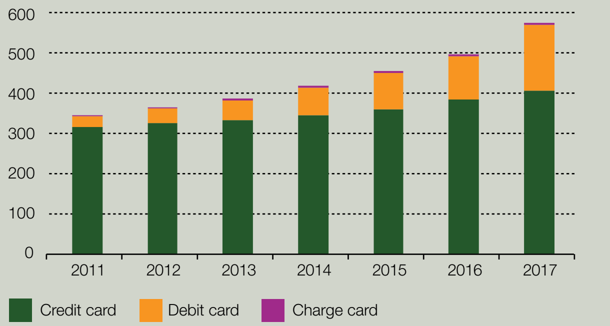
The Bank, in ensuring that such costs do not become an unnecessary burden to businesses and consumers, remains committed to encourage the adoption of less costly e-payment alternatives. The Instant Transfer fee will therefore be waived for transactions up to RM5,000 for individuals and SMEs beginning 1 July 2018. Such transactions account for about 79.6% of the annual cheque volume issued by individuals and SMEs from 2015 to 2017. The ePIF will also be enlarged from 2018 to 2020, with an estimated additional contribution of RM198 million from banks, insurance companies and takaful operators. To improve price signals, the Bank will also increase the fee for cheques issued from 50 sen to RM1.00 per cheque beginning 2 January 2021 in line with the higher cost of cheque processing.

Higher payment card usage to displace cash

Payment card usage continued to increase in 2017, growing at 15.7% and 10.3% in terms of transaction volume and value, respectively, to 573.5 million transactions valued at RM166.4 billion (2016: 495.5 million, RM150.8 billion) (Chart 6.6). Although credit cards remained the most widely used payment instrument, debit card transactions

Chart 6.6: Payment Card Transaction Volume by Card Type

Share of debit card transactions continued to increase



Source: Bank Negara Malaysia

registered a significant increase in 2017, growing at 50.9% and 32.1% in terms of transaction volume and value, respectively, to 162.3 million transactions valued at RM29.8 billion (2016: 107.6 million transactions, RM22.6 billion). Consequently, the share of debit card transactions of total payment card transaction volume increased from 21.7% in 2016 to 28.3% in 2017.

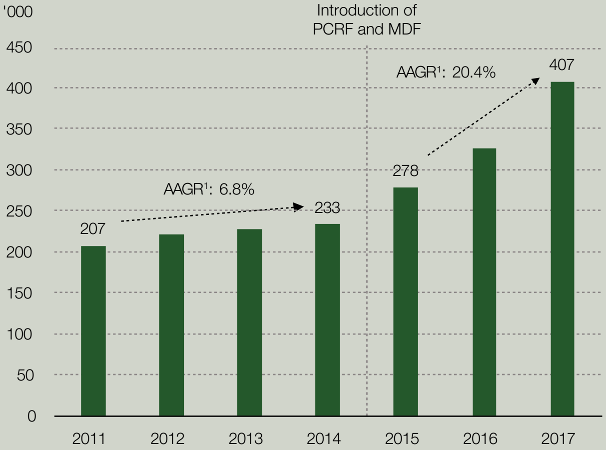
Debit cards have become increasingly popular with a significant growth of 50.9% and 32.1% in terms of transaction volume and value

There is also growing evidence of debit cards being used to displace cash. Debit cards are increasingly used for smaller ticket size items, with the average transaction size reducing from RM232 in 2013 to RM184 in 2017. The average growth in the volume of Automated Teller Machine (ATM) cash withdrawals per annum also moderated to 6.3% for the period 2013 to 2017, compared to 8.7% between 2008 and 2012. These trends may be attributable to three key factors:

- First, contactless card payments have gained momentum. Within the year, the ratio of contactless transactions to total debit card transactions increased significantly from 1.9% in 2016 to 7.8% in 2017. This was further supported by the continued expansion of contactless POS terminals from the 33,721 terminals in 2016 to 96,601 in 2017.
- Second, the wider network of POS terminals has enabled the greater use of debit cards. POS terminals continued to sustain a double-digit growth in 2017, increasing by 24.7% to 407,111 terminals (2016: 17.3%, 326,507 terminals) (Chart 6.7). This is driven by the MDF and the continued decline in

Chart 6.7: Number of POS Terminals

Sustained double-digit growth in POS terminals since 2015



[1]Average annual growth rate

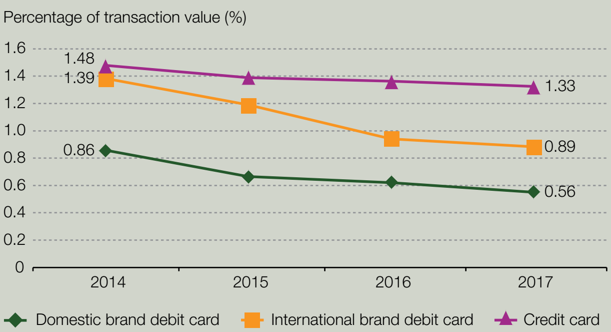
Source: Bank Negara Malaysia

the average MDR (Chart 6.8), which had resulted in an estimated annual cost savings to merchants of RM277.1 million in 2017 and a cumulative cost savings of RM507.6 million since the implementation of the PCRF in 2015.

- Third, public engagement efforts to create greater awareness and confidence in the usage of debit cards also played an important role. The Bank, in collaboration with industry players, continued to embark on nationwide roadshows, engagements with business associations, and other outreach and education initiatives through print and digital media. During the year, the National Cards Group (NCG) also organised a series of township campaigns

Chart 6.8: Average MDR by Type of Payment Card Transactions

Average MDR continued to decline



Source: Bank Negara Malaysia

across Malaysia to encourage businesses to accept payment cards by offering various incentives at 108 participating bank branches in 14 towns.

Mobile payments to complement debit cards in displacing cash

The mobile payments landscape continues to show significant potential in accelerating the migration to e-payments. In Malaysia, key enablers include the widespread use of mobile phones, an increasing acceptance of mobile payments by consumers and merchants, and the growing presence of new entrants within the segment. Mobile penetration remained high with 42.4 million mobile phone subscriptions for a population of 32.1 million, of which 70% are smartphones. In 2017, financial transactions through the mobile banking channel grew by 90.1% to 106.1 million transactions valued at RM48.3 billion (2016: 74.3%, 55.8 million transactions, RM33.2 billion). The number of total non-bank e-money issuers had also increased to 37 issuers in 2017 (2016: 26 issuers). Increasingly, banks and non-bank e-money issuers are offering payment services through mobile applications which include QR codes and person-to-person (P2P) funds transfers. These trends are expected to intensify competition with the potential to lower costs and enhance the range of mobile payment offerings.

A key development to foster an enabling environment for the wider adoption of mobile payments is the issuance of the ICTF by the Bank in 2018. The ICTF promotes collaborative competition (co-opetition) between banks and non-bank e-money issuers. Issuers collaborate at the infrastructure level to expand network reach and lower costs through a shared payment infrastructure, while allowing competition at the product level to enhance service levels and deliver superior customer experience.

The ICTF builds on these three key pillars:

- Fair and open access to the shared payment infrastructure, which will be available to both banks and eligible non-bank e-money issuers. This is expected to expand network reach while reducing market fragmentation. Given the diverse profile of payment service providers, the ICTF applies proportionate risk management requirements commensurate with the nature, scale and complexity of the institutions' activities and risk profiles.
- Interoperability of credit transfer services, including mobile payments. Account holders will be able to transfer funds seamlessly by referencing the

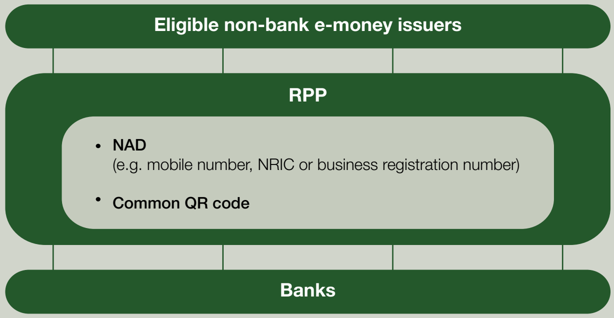
recipient's common identifier registered in the National Addressing Database (NAD) that will be established by the shared payment infrastructure operator. Such identifiers include the recipient's mobile number, National Registration Identity Card (NRIC) or business registration number, irrespective of where the recipient's account is maintained. The ICTF also requires the shared payment infrastructure operator to establish an interoperable QR scheme that enables consumers and merchants to make and receive payments through the use of a common QR code.

- Market conduct requirements and safeguards to protect consumers and merchants. These include the extension of the liability protection rule for electronic banking to users of credit transfer services, including mobile payments. In addition, banks and non-bank e-money issuers are required to provide users with instant transaction notifications and a convenient means to manage transaction limits and check account balances on a real-time basis. Banks and non-bank e-money issuers are also required to deploy robust controls for protecting customer data.

Collectively, these pillars are envisaged to mitigate risks of market fragmentation, while spurring greater competition and innovation between banks and non-bank e-money issuers. This will in turn encourage the development of value-added services which cater to the needs of different customer segments. As part of ongoing initiatives to encourage mobile payments among consumers and merchants, the Bank will collaborate closely with the industry to improve public awareness and education to address any issues in relation to the implementation of new payment methods such as QR code payments.

Diagram 6.2

Overview of the RPP Ecosystem



Source: Bank Negara Malaysia

On 1 August 2017, the Malaysian Electronic Clearing Corporation Sdn. Bhd. (MyClear), which operates Malaysia's large value payment system and develops key financial market infrastructures, and the Malaysian Electronic Payment System Sdn. Bhd. (MEPS), which provides shared ATM network services, merged to form PayNet. The merger marked an important development aimed at harnessing synergies and better aligning industry resources in developing Malaysia's payment systems. As the shared payment infrastructure operator, PayNet is envisaged to play an important role in supporting the effective implementation of the ICTF.

In addition, PayNet has been charged with the development of the Real-time Retail Payments Platform (RPP) as a catalyst for greater innovation in the domestic payments space. Work on the RPP continued to make good progress during the year and the RPP is targeted for implementation by the third quarter of 2018 (Diagram 6.2).

Annex

Annex

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Key Financial and Payment Systems Statistics

Table A.1

Key Financial Soundness Indicators

	As at end				
	2013	2014	2015	2016	2017*p*
	% (or otherwise stated)				
Banking System					
Total Capital Ratio	14.9	15.9	16.6	16.5	17.1
Tier 1 Capital Ratio	13.5	14.0	14.2	14.0	14.3
Common Equity Tier 1 Capital Ratio	12.6	13.3	13.3	13.1	13.3
Return on Assets	1.5	1.5	1.3	1.3	1.5
Return on Equity	15.9	15.2	12.3	12.5	13.0
Liquid Assets to Total Assets	11.6	13.3	-	-	-
Liquid Assets to Short-term Liabilities	36.5	42.6	-	-	-
Liquidity Coverage Ratio[1]	-	-	127.4	124.3	134.9
Net Impaired Loans Ratio	1.3	1.2	1.2	1.2	1.1
Capital Charge on Interest Rate Risk in the Trading Book to Capital Base	1.5	1.4	1.2	1.1	1.0
Net Open Position in FC to Capital Base	5.7	4.7	6.1	6.3	6.1
Equity Holdings to Capital Base	0.8	1.3	0.7	1.5	1.0
Insurance and Takaful Sector					
Capital Adequacy Ratio (conventional only)	246.1	251.9	251.6	248.2	236.3
Life Insurance and Family Takaful					
Excess Income over Outgo (RM billion)	13.2	13.8	12.0	13.3	19.0
New Business Premiums / Contributions (RM billion)	12.1	12.9	13.2	14.2	15.1
Capital Adequacy Ratio (conventional only)	260.9	259.2	260.6	245.0	233.5
General Insurance and General Takaful					
Underwriting Profit (RM billion)	1.8	1.8	1.3	1.8	1.4
Operating Profit (RM billion)	3.2	3.2	2.7	3.4	2.7
Gross Direct Premiums / Contributions (RM billion)	17.8	19.1	19.5	19.7	19.9
Claims Ratio	57.1	57.5	60.2	55.9	58.3
Capital Adequacy Ratio (conventional only)	231.7	279.7	263.3	269.1	268.9
Household (HH) Sector					
HH Debt (RM billion)	877.4	960.0	1,030.5	1,086.1	1,139.9
HH Financial Asset (RM billion)	1,904.9	2,015.0	2,119.3	2,232.4	2,423.6
HH Debt-to-GDP Ratio	86.1	86.8	89.0	88.3	84.3
HH Financial Asset to Total HH Debt Ratio	217.1	209.9	205.7	205.5	212.6
HH Liquid Financial Asset to Total HH Debt Ratio	155.7	147.5	142.4	140.7	145.2
Impaired Loans Ratio of HH Sector	2.2	1.9	1.6	1.6	1.6
Business Sector					
Return on Assets	6.4	6.0	4.9	4.6	4.4
Return on Equity	11.3	10.2	8.8	7.9	7.7
Debt-to-Equity Ratio	39.1	39.2	43.2	43.0	47.0
Interest Coverage Ratio (times)	13.1	12.0	10.6	11.5	9.1
Operating Margin	16.1	15.9	14.8	14.5	15.4
Impaired Loans Ratio of Business Sector	2.9	2.6	2.5	2.5	2.5
Development Financial Institutions[2]					
Lending to Targeted Sectors (% change)	8.1	7.0	5.5	5.7	0.1
Deposits Mobilised (% change)	7.2	5.3	2.0	6.4	4.8
Impaired Loans Ratio	5.6	5.0	4.8	5.9	5.2
Return on Assets	2.2	1.6	1.4	1.0	1.4

1 The Basel III Liquidity Coverage Ratio (LCR) Framework takes effect on 1 June 2015 and supersedes the guidelines on Liquidity Framework and Liquidity Framework-i issued on 1 July 1998
2 Refers to development financial institutions under the Development Financial Institutions Act 2002
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia, Securities Commission Malaysia, Bursa Malaysia, Bloomberg, Department of Statistics, Malaysia and internal computation

Table A.2

Household Sector: Gross Impaired and Delinquent Loans in the Banking System and Non-Bank Financial Institutions

	Gross Impaired Loans						Gross Delinquent Loans					
	Ratio (%)			Annual Change (%)			Ratio (%)			Annual Change (%)		
	2015	2016	2017	2015	2016	2017	2015	2016	2017	2015	2016	2017
Overall	**1.6**	**1.6**	**1.6**	**-6.1**	**4.2**	**2.0**	**1.5**	**1.5**	**1.4**	**-7.8**	**2.7**	**-0.6**
Residential properties	1.8	1.7	1.6	-4.6	3.6	2.4	1.5	1.4	1.3	1.3	3.8	-1.1
Non-residential properties	1.0	1.1	1.2	-3.4	9.6	11.5	0.7	0.9	1.1	-2.0	28.2	21.1
Motor vehicles	1.4	1.4	1.4	-20.7	-2.6	-1.1	2.8	2.8	2.7	-22.8	-3.4	-2.3
Personal financing	1.9	2.0	2.2	12.2	14.8	9.5	0.7	0.8	0.8	13.9	13.8	2.1
Credit cards	1.8	1.9	1.6	-16.9	5.2	-11.9	1.3	1.2	1.1	-13.3	0.4	-10.4

Source: Bank Negara Malaysia

Table A.3

Business Sector: Gross Impaired and Delinquent Loans in the Banking System

	% of Total Domestic Debt Exposure[1]	% of Total Business Loans	Gross Impaired Loans Ratio (%)			Gross Delinquent Loans Ratio (%)		
	2017		2015	2016	2017	2015	2016	2017
Overall		**100**	**2.5**	**2.5**	**2.5**	**0.3**	**0.4**	**0.3**
of which: SMEs		***53.1***	***2.5***	***2.4***	***2.6***	***0.4***	***0.5***	***0.5***
Primary agriculture	5.3	6.1	1.0	0.9	0.7	0.1	0.1	0.2
of which: Palm oil	*3.7*	*4.2*	*1.2*	*1.0*	*0.8*	*0.1*	*0.1*	*0.2*
Mining & quarrying	2.2	1.7	0.2	4.0	5.2	0.1	0.2	0.6
of which: Oil & gas[2]	*2.0*	*1.4*	*0.1*	*4.2*	*5.5*	*0.03*	*0.1*	*0.5*
Manufacturing	15.3	17.9	3.9	3.7	3.5	0.2	0.2	0.3
of which: Automotive	*1.0*	*1.1*	*2.2*	*3.7*	*7.2*	*0.03*	*0.3*	*0.1*
Construction	14.6	12.6	2.8	2.4	2.4	0.5	0.6	0.5
Services	62.6	61.7	2.3	2.2	2.4	0.3	0.4	0.3
of which: Wholesale and retail trade	*14.8*	*17.5*	*1.9*	*1.7*	*1.8*	*0.3*	*0.4*	*0.4*
of which: Transport and storage	*5.4*	*4.3*	*7.9*	*7.9*	*9.5*	*1.2*	*1.5*	*0.1*
of which: Post and telecommunication	*2.6*	*2.0*	*2.2*	*2.0*	*1.1*	*0.1*	*0.5*	*0.1*
of which: Real estate activities	*18.6*	*19.9*	*1.5*	*1.5*	*1.5*	*0.2*	*0.2*	*0.3*

[1] Includes loans from the banking system and holdings of corporate bonds/sukuk by banks
[2] Includes upstream and downstream activities

Source: Bank Negara Malaysia

Table A.4

Key Financial Indicators: Islamic Banking and Takaful Sectors

	As at end				
	2013	2014	2015	2016	2017*p*
Islamic Banking System	RM million (or otherwise stated)				
Total assets[1,2]	558,295.0	615,190.0	684,906.2	743,562.8	829,819.3
% of total assets of entire banking system[1,2]	25.0	25.5	26.8	28.0	30.0
Total financing[1,2]	370,673.8	427,887.8	495,005.9	553,402.4	605,522.8
% of total loans / financing of entire banking system[1,2]	27.5	29.2	31.3	33.2	34.9
Total deposits and investment accounts[1,3]	-	-	550,275.1	602,204.1	672,611.2
Total deposits	436,327.6	494,738.3	503,127.8	528,527.0	593,878.8
Total investment accounts	-	-	47,147.3	73,677.1	78,732.4
% of total deposits and investment accounts of entire banking system[1,3]	26.7	28.2	30.0	31.7	34.1
	%				
Total Capital Ratio	15.1	16.2	16.1	16.6	17.6
Tier 1 Capital Ratio	12.8	12.9	12.3	13.0	13.7
Common Equity Tier 1 Capital Ratio	12.8	12.8	12.3	13.0	13.2
Return on Assets	1.2	1.1	1.0	1.0	1.1
Net Impaired Financing Ratio	1.0	0.9	0.9	1.0	0.9
Takaful Sector	RM million (or otherwise stated)				
Takaful Fund Assets	20,934.2	22,746.3	24,711.0	26,781.7	29,289.8
Family	17,952.2	19,619.3	21,389.1	23,189.1	25,643.5
General	2,982.0	3,127.0	3,321.9	3,592.5	3,646.3
% of insurance and takaful industry	9.2	9.4	9.7	10.0	10.1
Net Contribution Income	6,207.9	6,330.6	6,815.6	7,534.6	8,253.4
Family	4,807.4	4,787.2	5,104.3	5,743.9	6,353.0
General	1,400.5	1,543.4	1,711.3	1,790.7	1,900.4
% of insurance and takaful industry	14.1	13.4	13.8	14.6	15.2
Family Takaful					
New Business Contributions	3,563.5	3,500.3	3,638.4	3,951.1	4,345.6
General Takaful					
Gross Direct Contributions	1,908.8	2,163.7	2,295.9	2,401.7	2,557.0
Claims Ratio (%)	53.6	47.8	51.9	49.0	51.1

[1] Including development financial institutions under the Development Financial Institutions Act 2002
[2] Beginning 1 July 2015, includes assets / financing funded by investment accounts which are recognised on and off-balance sheet
[3] Beginning 1 July 2015, Islamic deposits and investment accounts are required to be designated separately. Investment account figures include those which are recognised on and off-balance sheet
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.5

Banking System[1]: Income and Expenditure

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million (or otherwise stated)				
Interest income	83,079.3	89,416.7	96,784.6	100,160.0	104,204.9
Less: Interest expense	43,621.4	47,911.5	54,612.9	57,191.2	57,902.9
Net interest income	39,457.8	41,505.1	42,171.8	42,968.8	46,302.0
Add: Fee-based income	9,617.6	10,103.0	9,682.7	9,380.2	10,552.3
Less: Staff cost	13,561.5	13,628.7	15,206.3	14,294.4	15,308.0
Overheads	13,383.7	14,171.8	15,229.4	15,160.6	15,728.6
Gross operating profit	22,130.2	23,807.6	21,418.8	22,893.9	25,817.7
Less: Impairment[2] and other provisions	2,427.1	1,472.0	2,883.7	2,700.9	2,066.4
Gross operating profit after provision	19,703.1	22,335.6	18,535.1	20,193.1	23,751.3
Add: Other income	10,054.5	9,593.3	10,460.8	12,053.3	12,459.0
Pre-tax profit	**29,757.6**	**31,928.9**	**28,995.9**	**32,246.3**	**36,210.3**
Pre-tax profit / Average assets (%)	1.5	1.5	1.3	1.3	1.5
Pre-tax profit / Average shareholders' funds (%)	15.9	15.2	12.3	12.5	13.0
Pre-tax profit / Average employee (RM'000)	236.2	255.0	237.1	271.3	305.2
Cost incurred per ringgit of revenue earned (sen)	45.6	45.4	48.8	45.7	44.8
Cost incurred per ringgit of net interest income (sen)	68.3	67.0	72.2	68.5	67.0
Overheads to staff cost (%)	98.7	104.0	100.2	106.1	102.7
Staff cost per employee (RM'000)	108.4	108.8	127.5	120.7	128.8

1 Includes Islamic banks
2 Refers to individual and collective impairment provisions in accordance with the Policy Document on Classification and Impairment Provisions for Loans / Financing
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Annex

Table A.6

Commercial Banks[1]: Income and Expenditure

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million (or otherwise stated)				
Interest income	81,085.9	87,707.9	95,028.2	98,543.5	102,490.8
Less: Interest expense	42,165.1	46,598.7	53,348.2	56,106.7	56,706.9
Net interest income	38,920.9	41,109.2	41,680.0	42,436.7	45,783.9
Add: Fee-based income	7,874.4	8,179.1	8,076.6	8,068.0	8,976.7
Less: Staff cost	12,399.9	12,488.5	14,071.0	13,253.9	14,200.8
Overheads	12,571.6	13,232.2	14,394.9	14,486.0	15,101.0
Gross operating profit	21,823.8	23,567.5	21,290.7	22,764.8	25,458.9
Less: Impairment[2] and other provisions	2,467.4	1,487.0	2,925.7	2,687.3	2,018.8
Gross operating profit after provision	19,356.4	22,080.5	18,365.0	20,077.5	23,440.1
Add: Other income	9,409.3	8,675.3	9,898.3	11,398.8	11,896.8
Pre-tax profit	**28,765.7**	**30,755.8**	**28,263.3**	**31,476.4**	**35,336.9**
Pre-tax profit / Average assets (%)	1.5	1.5	1.3	1.3	1.4
Pre-tax profit / Average shareholders' funds (%)	16.0	15.4	12.6	12.8	13.2
Pre-tax profit / Average employee (RM'000)	246.3	264.6	249.2	284.7	316.1
Cost incurred per ringgit of revenue earned (sen)	44.4	44.4	47.7	44.8	44.0
Cost incurred per ringgit of net interest income (sen)	64.2	62.6	68.3	65.4	64.0
Overheads to staff cost (%)	101.4	106.0	102.3	109.3	106.3
Staff cost per employee (RM'000)	106.7	107.5	127.2	120.0	125.6

[1] Includes Islamic banks

[2] Refers to individual and collective impairment provisions in accordance with the Policy Document on Classification and Impairment Provisions for Loans / Financing

p Preliminary

Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.7

Investment Banks: Income and Expenditure

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million (or otherwise stated)				
Interest income	1,993.3	1,708.8	1,756.4	1,616.6	1,714.1
Less: Interest expense	1,456.4	1,312.8	1,264.6	1,084.5	1,196.0
Net interest income	536.9	396.0	491.8	532.1	518.0
Add: Fee-based income	1,743.2	1,923.9	1,606.1	1,312.2	1,575.6
Less: Staff cost	1,161.5	1,140.1	1,135.3	1,040.5	1,107.2
Overheads	812.2	939.6	834.5	674.5	627.6
Gross operating profit	306.4	240.1	128.1	129.1	358.8
Less: Impairment[1] and other provisions	-40.4	-15.0	-42.0	13.6	47.7
Gross operating profit after provision	346.8	255.1	170.1	115.5	311.2
Add: Other income	645.2	918.0	562.5	654.4	562.2
Pre-tax profit	**991.9**	**1,173.1**	**732.6**	**770.0**	**873.4**
Pre-tax profit / Average assets (%)	1.7	2.1	1.4	1.5	1.7
Pre-tax profit / Average shareholders' funds (%)	10.6	11.4	6.9	7.2	8.2
Pre-tax profit / Average employee (RM'000)	107.7	130.8	82.7	92.9	127.0
Cost incurred per ringgit of revenue earned (sen)	67.5	64.2	74.0	68.6	65.3
Cost incurred per ringgit of net interest income (sen)	367.6	525.2	400.6	322.4	334.9
Overheads to staff cost (%)	69.9	82.4	73.5	64.8	56.7
Staff cost per employee (RM'000)	131.8	125.0	131.9	130.6	191.5

[1] Refers to individual and collective impairment provisions in accordance with the Policy Document on Classification and Impairment Provisions for Loans / Financing

p Preliminary

Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Annex

Table A.8

Islamic Banking System: Income and Expenditure

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million (or otherwise stated)				
Income[1]	18,106.3	20,416.1	23,520.3	25,762.8	28,192.1
of which: derived from assets funded by investment accounts	-	-	*1,041.9*	*7,295.8*	*8,122.8*
Less: Expense[1]	9,422.9	10,888.9	13,738.6	15,238.0	16,432.8
of which: profit distributed to investment account holders	-	-	*601.7*	*3,987.0*	*5,289.9*
Net income	8,683.3	9,527.2	9,781.7	10,524.8	11,759.3
Add: Fee-based income[2]	1,048.4	1,056.9	1,121.3	1,309.9	1,571.2
Less: Staff cost	1,740.0	1,741.9	1,754.7	1,789.6	2,001.7
Overheads	3,079.2	3,225.5	3,495.6	3,685.4	3,989.2
Gross operating profit	4,912.5	5,616.8	5,652.8	6,359.7	7,339.5
Less: Impairment[3] and other provisions	443.8	758.2	1,067.8	1,175.1	756.9
Gross operating profit after provision	4,468.7	4,858.6	4,585.0	5,184.6	6,582.6
Add: Other income	444.0	253.1	449.4	392.0	96.3
Pre-tax profit	**4,912.7**	**5,111.7**	**5,034.4**	**5,576.6**	**6,678.9**
Pre-tax profit / Average assets (%)	1.2	1.1	1.0	1.0	1.1
Pre-tax profit / Average shareholders' funds (%)	17.0	15.7	14.0	13.9	15.1
Pre-tax profit / Average employee (RM'000)[4]	167.0	173.1	161.8	177.6	201.1
Cost incurred per ringgit of revenue earned (sen)	24.6	22.9	20.9	19.9	20.1
Cost incurred per ringgit of net income (sen)	55.5	52.1	53.7	52.0	50.9
Overheads to staff cost (%)	177.0	185.2	199.2	205.9	199.3
Staff cost per employee (RM'000)[4]	59.1	59.0	56.4	57.0	60.3

[1] Beginning 1 July 2015, income and expenses include those arising from assets funded by investment accounts and profit distributed to investment account holders

[2] Including income derived from assets funded by investment accounts which are recognised off-balance sheet

[3] Refers to individual and collective impairment provisions in accordance with the Policy Document on the Classification and Impairment Provisions for Loans / Financing

[4] Number of employees is estimated based on the percentage of the institutions' Islamic assets

p Preliminary

Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.9

Banking System: Network and Workforce

	As at end				
	2013	2014	2015	2016	2017*p*
Number of institutions	55	54	54	54	54
Commercial banks	*27*	*27*	*27*	*27*	*27*
Investment banks	*12*	*11*	*11*	*11*	*11*
Islamic banks	*16*	*16*	*16*	*16*	*16*
Office network	2,479	2,494	2,500	2,498	2,494
Commercial banks	*2,029*	*2,045*	*2,048*	*2,019*	*2,019*
Investment banks	*135*	*135*	*119*	*130*	*130*
Islamic banks[1]	*2,177*	*2,192*	*2,206*	*2,197*	*2,196*
Number of employees	125,071	125,307	119,246	118,465	118,851
Commercial banks	*106,006*	*106,783*	*101,718*	*101,378*	*103,806*
Investment banks	*8,814*	*9,122*	*8,606*	*7,970*	*5,783*
Islamic banks	*10,251*	*9,402*	*8,922*	*9,117*	*9,262*

[1] Includes Islamic bank branches that are shared with conventional bank branches
p Preliminary

Source: Bank Negara Malaysia

Table A.10

Commercial Banks[1]: Commitments and Contingencies

	As at end				
	2013	2014	2015	2016	2017*p*
	RM million				
Assets sold with recourse and commitments with drawdown	5,284.8	6,762.4	8,852.4	12,066.7	17,399.9
Credit extension commitments	470,299.8	472,472.5	490,961.9	503,193.1	523,609.8
Direct credit substitutes	33,087.9	29,897.3	32,830.2	30,867.5	28,027.3
Foreign exchange-related contracts	577,388.4	760,062.7	891,122.5	924,253.8	930,583.3
Interest rate-related contracts	772,958.0	791,736.1	858,058.7	941,300.7	958,693.0
Trade-related contingencies	10,677.4	13,724.3	13,505.9	11,834.1	11,173.2
Transaction-related contingencies	50,561.5	57,964.8	60,492.9	66,338.3	66,115.5
Underwriting obligations	522.0	466.0	76.0	76.0	415.0
Others	55,541.2	63,046.9	58,523.2	58,783.8	40,588.9
Total	**1,976,320.9**	**2,196,133.0**	**2,414,423.9**	**2,548,714.0**	**2,576,605.8**

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

Source: Bank Negara Malaysia

Table A.11

Investment Banks: Commitments and Contingencies

	As at end				
	2013	2014	2015	2016	2017*p*
	RM million				
Assets sold with recourse and commitments with drawdown	12.4	77.0	4.5	11.0	4.0
Credit extension commitments	5,454.8	5,609.1	5,802.7	6,160.1	6,825.1
Direct credit substitutes	316.6	418.0	543.0	305.4	109.2
Foreign exchange-related contracts	7,548.1	7,941.7	8,736.5	6,064.5	7,973.8
Interest rate-related contracts	9,779.4	8,957.2	7,370.6	7,574.8	7,759.8
Trade-related contingencies	0.0	0.0	0.0	0.0	0.0
Transaction-related contingencies	10.5	10.5	10.5	10.5	10.5
Underwriting obligations	680.8	90.2	218.4	85.6	120.0
Others	3,402.7	3,296.3	2,967.2	2,892.6	3,057.7
Total	**27,205.4**	**26,399.9**	**25,653.4**	**23,104.7**	**25,859.9**

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

Source: Bank Negara Malaysia

Annex

Table A.12

Life Insurance[1]: Income and Outgo

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million				
Net premiums	26,458.1	28,824.8	30,041.2	31,585.9	33,233.0
Less: Net policy benefits	16,357.7	17,997.2	20,541.3	21,372.9	22,617.1
Agency remuneration	3,667.9	3,837.0	3,899.6	4,100.8	4,303.7
Total management expenses	2,481.8	2,626.5	2,994.6	3,228.1	3,471.2
Balance of transaction	3,950.7	4,364.1	2,605.6	2,884.2	2,841.0
Add: Net investment income	7,208.4	7,623.2	8,057.0	8,446.2	9,070.1
Net capital gain (loss)	-1,344.2	-856.2	-209.7	260.4	4,052.3
Net other income (outgo)	1,272.8	512.9	-104.2	-341.1	460.5
Excess income over outgo	**11,087.7**	**11,643.9**	**10,348.7**	**11,249.7**	**16,423.8**

[1] Figures are based on global business of life insurance
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.13

General Insurance[1]: Underwriting and Operating Results

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million				
Earned premium income	13,821.3	14,885.6	15,633.8	15,995.0	16,365.9
Less: Net claims incurred	7,934.2	8,699.6	9,553.3	9,062.6	9,666.9
Net commission	1,789.8	1,963.4	2,015.6	2,172.5	2,127.5
Total management expenses	2,477.1	2,656.4	2,929.3	3,211.1	3,368.1
Underwriting profit	1,620.1	1,566.3	1,135.6	1,548.9	1,203.4
Add: Net investment income	1,015.7	1,063.9	1,152.8	1,247.6	1,257.2
Net capital gains (loss)	24.8	-29.2	1.0	-6.4	36.7
Net other income (outgo)	180.5	197.3	88.3	194.9	-140.0
Operating profit	**2,841.1**	**2,798.3**	**2,377.7**	**2,984.9**	**2,357.3**

[1] Figures are based on global business of general insurance
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.14

Family Takaful[1]: Income and Outgo

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million				
Net contributions	4,807.4	4,787.2	5,104.3	5,743.9	6,353.0
Less: Net certificate benefits	1,999.2	2,027.6	2,449.9	2,666.3	2,881.4
Net commissions	761.2	731.5	850.6	953.7	1,063.7
Total management expenses	642.5	731.4	845.7	968.9	1,118.3
Balance of transaction	1,404.5	1,296.7	958.2	1,155.0	1,289.5
Add: Net investment income	659.1	736.9	837.4	922.6	1,031.6
Net capital gain (loss)	-164.4	-56.1	16.4	-8.8	194.3
Net other income (outgo)	206.6	138.5	-140.5	-59.1	41.0
Excess income over outgo	**2,105.9**	**2,116.0**	**1,671.5**	**2,009.6**	**2,556.4**

[1] Figures are based on global business and actual expenses borne by family takaful funds
p Preliminary
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.15

General Takaful[1]: Underwriting and Operating Results

	For the calendar year				
	2013	2014	2015	2016	2017*p*
	RM million				
Earned contribution income	1,390.0	1,466.8	1,671.4	1,778.0	1,863.8
Less: Net claims incurred	743.2	700.6	867.9	870.5	953.3
Net commission	192.4	91.9	105.0	101.3	99.5
Total management expenses	247.4	416.7	502.9	553.2	650.5
Underwriting profit	207.0	257.6	195.6	253.0	160.5
Add: Net investment income	102.8	110.6	119.1	128.6	134.0
Net capital gains (loss)	-0.9	0.5	0.7	-0.4	0.0
Net other income (outgo)	72.7	9.6	3.3	39.3	6.9
Operating profit	**381.6**	**378.3**	**318.8**	**420.5**	**301.5**

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

Source: Bank Negara Malaysia

Table A.16

Development Financial Institutions: Sources and Uses of Funds

	DFIs[1] under DFIA[2]		Non-DFIA[2] DFIs[3]		Total DFIs	
	As at end					
	2016	2017	2016	2017	2016	2017
	RM million					
Sources:						
Shareholders' equity	31,379.3	33,924.4	9,168.3	9,110.6	40,547.6	43,035.0
of which:						
Paid-up capital	11,123.4	11,623.4	2,871.5	2,871.5	13,994.9	14,494.9
Reserves	8,048.0	9,228.1	1,391.6	1,129.6	9,439.6	10,357.7
Retained earnings/losses	9,649.7	10,712.8	1,879.7	2,091.3	11,529.4	12,804.1
Liabilities	173,058.8	177,799.0	76,524.3	82,597.6	249,583.1	260,396.6
of which:						
Deposits accepted	126,159.1	129,511.6	66,017.1	71,763.8	192,176.2	201,275.4
Borrowings	11,248.5	9,144.6	7,547.9	7,606.8	18,796.4	16,751.4
Government	*7,966.1*	*7,314.5*	*1,607.1*	*1,592.8*	*9,573.2*	*8,907.3*
Multilateral/International agencies	*2,382.4*	*1,830.1*	*4.8*	-	*2,387.2*	*1,830.1*
Others	*900.0*	-	*5,936.0*	*6,014.0*	*6,836.0*	*6,014.0*
Debt securities issued	20,502.7	21,110.4	-	-	20,502.7	21,110.4
Total	**204,438.1**	**211,723.4**	**85,692.6**	**91,708.2**	**290,130.7**	**303,431.6**
Uses:						
Assets	204,438.1	211,723.4	85,692.6	91,708.2	290,130.7	303,431.6
of which:						
Deposits placed	7,445.9	5,565.1	11,440.4	12,160.8	18,886.3	17,725.9
Investments	43,618.2	49,837.1	53,194.5	56,620.3	96,812.7	106,457.4
of which:						
Government securities	*23,857.5*	*23,580.6*	-	-	*23,857.5*	*23,580.6*
Shares	*906.2*	*848.8*	*20,166.2*	*18,527.4*	*21,072.4*	*19,376.2*
Quoted	*860.4*	*802.9*	*19,783.3*	*18,358.8*	*20,643.7*	*19,161.7*
Unquoted	*45.8*	*45.9*	*382.9*	*168.6*	*428.7*	*214.5*
Corporate debt securities	*10,747.0*	*14,002.2*	*15,498.9*	*17,993.3*	*26,245.9*	*31,995.5*
Loans and advances	143,330.2	143,546.2	9,594.0	9,930.6	152,924.2	153,476.8
Fixed assets	4,111.3	4,432.5	7,180.3	7,951.9	11,291.6	12,384.4
Total	**204,438.1**	**211,723.4**	**85,692.6**	**91,708.2**	**290,130.7**	**303,431.6**
Contingencies:						
Guarantee	729.0	613.0	5,242.6	6,496.2	5,971.6	7,109.2
Export credit insurance	1,333.5	1,795.8	-	-	1,333.5	1,795.8
Total	**2,062.5**	**2,408.8**	**5,242.6**	**6,496.2**	**7,305.1**	**8,905.0**

1 Refers to Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat), Bank Simpanan Nasional (BSN), Bank Pembangunan Malaysia Berhad (Bank Pembangunan), Bank Pertanian Malaysia Berhad (Agrobank), Export-Import Bank of Malaysia Berhad (EXIM Bank) and Small Medium Enterprise Development Bank Malaysia Berhad (SME Bank)

2 Development Financial Institutions Act 2002

3 Refers to Lembaga Tabung Haji (LTH), Credit Guarantee Corporation Malaysia Berhad (CGC), Sabah Development Bank Berhad (SDB), Malaysian Industrial Development Finance Berhad (MIDF), Sabah Credit Corporation (SCC), Borneo Development Corporation (Sarawak) Sendirian Berhad (BDC Sarawak) and Borneo Development Corporation (Sabah) Sendirian Berhad (BDC Sabah)

Table A.17

Development Financial Institutions[1] under DFIA[2]: Sources and Uses of Funds

	As at end-2017						
	Bank Rakyat	BSN	Bank Pembangunan	Agrobank	EXIM Bank	SME Bank	Total
	RM million						
Sources:							
Shareholders' equity	16,292.8	2,506.6	7,546.1	2,794.6	2,761.8	2,022.5	33,924.4
of which:							
Paid-up capital	2,986.0	-	3,078.7	1,000.0	2,708.7	1,850.0	11,623.4
Reserves	5,525.9	1,226.0	1,941.7	459.8	93.6	-18.9	9,228.1
Retained earnings/losses	5,920.0	1,102.6	2,407.4	1,164.5	51.4	66.9	10,712.8
Liabilities	90,415.9	28,335.6	22,927.5	13,249.9	13,679.4	9,190.7	177,799.0
of which:							
Deposits accepted	83,359.8	24,883.1	8,073.8	9,769.4	-	3,425.5	129,511.6
Borrowings	230.4	45.9	2,750.0	2,201.1	1,866.0	2,051.2	9,144.6
Government	*230.4*	*45.9*	*2,750.0*	*2,201.1*	*35.9*	*2,051.2*	*7,314.5*
Multilateral/International agencies	-	-	-	-	*1,830.1*	-	*1,830.1*
Others	-	-	-	-	-	-	-
Debt securities issued	3,443.8	-	7,550.0	-	8,295.2	1,821.4	21,110.4
Total	**106,708.7**	**30,842.2**	**30,473.6**	**16,044.5**	**16,441.2**	**11,213.2**	**211,723.4**
Uses:							
Assets	106,708.7	30,842.2	30,473.6	16,044.5	16,441.2	11,213.2	211,723.4
of which:							
Deposits placed	1,521.3	114.1	1,420.6	993.1	950.6	565.4	5,565.1
Investments	30,689.5	5,566.6	5,407.0	4,404.0	1,119.4	2,650.6	49,837.1
of which:							
Government securities	*17,663.1*	*2,216.7*	*1,223.1*	*1,529.2*	-	*948.5*	*23,580.6*
Shares	*581.4*	*71.0*	*187.0*	*0.2*	-	*9.2*	*848.8*
Quoted	*572.1*	*71.0*	*159.6*	*0.2*	-	-	*802.9*
Unquoted	*9.3*	-	*27.4*	-	-	*9.2*	*45.9*
Corporate debt securities	*4,394.8*	*438.8*	*3,996.9*	*2,874.6*	*1,119.4*	*1,177.7*	*14,002.2*
Loans and advances	70,628.9	22,363.7	22,033.3	9,609.9	12,390.8	6,519.6	143,546.2
Fixed assets	1,453.9	1,462.0	182.7	553.3	83.5	697.1	4,432.5
Total	**106,708.7**	**30,842.2**	**30,473.6**	**16,044.5**	**16,441.2**	**11,213.2**	**211,723.4**

[1] Refers to Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat), Bank Simpanan Nasional (BSN), Bank Pembangunan Malaysia Berhad (Bank Pembangunan), Bank Pertanian Malaysia Berhad (Agrobank), Export-Import Bank of Malaysia Berhad (EXIM Bank) and Small Medium Enterprise Development Bank Malaysia Berhad (SME Bank)
[2] Development Financial Institutions Act 2002

Table A.18

Development Financial Institutions: Financing by Economic Sector

	DFIs[1] under DFIA[2]		Non-DFIA[2] DFIs[3]		Total DFIs	
	As at end					
	2016	2017	2016	2017	2016	2017
	RM million					
Agriculture, forestry and fishery	9,224.8	9,984.5	724.8	763.7	9,949.6	10,748.2
Mining and quarrying	677.8	239.0	1,082.2	1,038.7	1,760.0	1,277.7
Manufacturing	5,331.1	4,975.6	429.5	427.1	5,760.6	5,402.7
Electricity, gas and water supply	4,432.6	4,047.7	481.9	490.7	4,914.5	4,538.4
Import and export, wholesale and retail trade, restaurants and hotels	4,750.2	5,012.8	194.6	178.3	4,944.8	5,191.1
Broad property sector	23,623.1	23,928.6	3,129.0	3,416.9	26,752.1	27,345.5
Construction	*12,183.2*	*11,972.8*	*2,462.8*	*2,687.8*	*14,646.0*	*14,660.6*
Purchase of residential property	*10,483.3*	*11,052.1*	*63.4*	*54.5*	*10,546.7*	*11,106.6*
Purchase of non-residential property	*232.0*	*220.0*	*24.4*	*24.4*	*256.4*	*244.4*
Real estate	*724.6*	*683.7*	*578.4*	*650.2*	*1,303.0*	*1,333.9*
Maritime	1,720.5	1,437.6	-	-	1,720.5	1,437.6
Transport, storage and communication	9,327.3	7,955.6	88.6	79.6	9,415.9	8,035.2
Finance, insurance and business services	4,938.7	4,704.7	505.6	352.0	5,444.3	5,056.7
Consumption credit	74,980.7	76,720.5	2,642.8	2,838.0	77,623.5	79,558.5
of which:						
Purchase of motor vehicles	*1,882.5*	*2,159.5*	*0.7*	*0.6*	*1,883.2*	*2,160.1*
Credit card	*936.3*	*958.6*	-	-	*936.3*	*958.6*
Community, social and other service activities	3,774.9	3,996.0	12.1	32.9	3,787.0	4,028.9
Purchase of securities	272.1	242.9	-	-	272.1	242.9
Other sectors	276.4	300.7	302.9	312.7	579.3	613.4
Total	**143,330.2**	**143,546.2**	**9,594.0**	**9,930.6**	**152,924.2**	**153,476.8**

[1] Refers to Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat), Bank Simpanan Nasional (BSN), Bank Pembangunan Malaysia Berhad (Bank Pembangunan), Bank Pertanian Malaysia Berhad (Agrobank), Export-Import Bank of Malaysia Berhad (EXIM Bank) and Small Medium Enterprise Development Bank Malaysia Berhad (SME Bank)

[2] Development Financial Institutions Act 2002

[3] Refers to Lembaga Tabung Haji (LTH), Credit Guarantee Corporation Malaysia Berhad (CGC), Sabah Development Bank Berhad (SDB), Malaysian Industrial Development Finance Berhad (MIDF), Sabah Credit Corporation (SCC), Borneo Development Corporation (Sarawak) Sendirian Berhad (BDC Sarawak) and Borneo Development Corporation (Sabah) Sendirian Berhad (BDC Sabah)

Table A.19

Development Financial Institutions[1] under DFIA[2]: Financing by Economic Sector

	As at end-2017						
	Bank Rakyat	BSN	Bank Pembangunan	Agrobank	EXIM Bank	SME Bank	Total
	RM million						
Agriculture, forestry and fishery	232.3	-	-	9,609.9	138.3	4.0	9,984.5
Mining and quarrying	-	-	-	-	211.1	27.9	239.0
Manufacturing	99.8	57.5	1,122.9	-	2,567.2	1,128.2	4,975.6
Electricity, gas and water supply	100.5	-	2,027.6	-	1,883.2	36.4	4,047.7
Import and export, wholesale and retail trade, restaurants and hotels	159.7	370.1	1,521.8	-	1,316.8	1,644.4	5,012.8
Broad property sector	2,840.9	9,589.4	8,061.0	-	2,382.0	1,055.3	23,928.6
Construction	*853.3*	-	*8,061.0*	-	*2,100.6*	*957.9*	*11,972.8*
Purchase of residential property	*1,495.3*	*9,556.8*	-	-	-	-	*11,052.1*
Purchase of non-residential property	*187.4*	*32.6*	-	-	-	-	*220.0*
Real estate	*304.9*	-	-	-	*281.4*	*97.4*	*683.7*
Maritime	-	-	1,437.6	-	-	-	1,437.6
Transport, storage and communication	168.4	19.2	5,072.4	-	1,955.5	740.1	7,955.6
Finance, insurance and business services	2,095.8	185.3	-	-	1,663.3	760.3	4,704.7
Consumption credit	64,771.0	11,949.5	-	-	-	-	76,720.5
of which:							
Purchase of motor vehicles	*1,005.9*	*1,153.6*	-	-	-	-	*2,159.5*
Credit card	*458.1*	*500.5*	-	-	-	-	*958.6*
Community, social and other service activities	104.3	4.9	2,782.5	-	-	1,104.3	3,996.0
Purchase of securities	56.2	186.7	-	-	-	-	242.9
Other sectors	-	1.1	7.5	-	273.4	18.7	300.7
Total	**70,628.9**	**22,363.7**	**22,033.3**	**9,609.9**	**12,390.8**	**6,519.6**	**143,546.2**

[1] Refers to Bank Kerjasama Rakyat Malaysia Berhad (Bank Rakyat), Bank Simpanan Nasional (BSN), Bank Pembangunan Malaysia Berhad (Bank Pembangunan), Bank Pertanian Malaysia Berhad (Agrobank), Export-Import Bank of Malaysia Berhad (EXIM Bank) and Small Medium Enterprise Development Bank Malaysia Berhad (SME Bank)
[2] Development Financial Institutions Act 2002

Table A.20

Development Financial Institutions : Selected Data

	As at end					
	2016			2017		
DFIs under DFIA[1]:	Branch	ATM	Staff	Branch	ATM	Staff
Bank Kerjasama Rakyat Malaysia Berhad	148	711	5,036	148	714	5,008
Bank Simpanan Nasional	402	727	7,233	403	744	7,116
Bank Pembangunan Malaysia Berhad	-	-	376	-	-	368
Bank Pertanian Malaysia Berhad	187	257	3,381	187	251	3,454
Export-Import Bank of Malaysia Berhad	-	-	332	-	-	340
Small Medium Enterprise Development Bank Malaysia Berhad	29	-	964	29	-	987
Sub-total	766	1,695	17,322	767	1,709	17,273
Non-DFIA[1] DFIs:						
Lembaga Tabung Haji	123	-	2,124	124	-	2,078
Credit Guarantee Corporation Malaysia Berhad	16	-	535	16	-	537
Sabah Development Bank Berhad	-	-	81	-	-	78
Malaysian Industrial Development Finance Berhad	5	-	278	5	-	284
Sabah Credit Corporation	13	-	178	13	-	172
Borneo Development Corporation (Sarawak) Sendirian Berhad	-	-	38	-	-	35
Borneo Development Corporation (Sabah) Sendirian Berhad	-	-	19	-	-	20
Sub-total	157	-	3,253	158	-	3,204
Total	**923**	**1,695**	**20,575**	**925**	**1,709**	**20,477**

[1] Development Financial Institutions Act 2002

Table A.21

Total Outward and Inward Remittances

	2013	2014	2015	2016	2017
	RM million				
Total outward[1]	**22,717.1**	**28,457.0**	**34,898.7**	**34,252.6**	**32,951.9**
Remitted via:					
Banks[2]	8,577.2	10,989.0	14,265.9	12,678.0	12,389.1
Money services business licensees[3]	14,139.9	17,468.0	20,632.8	21,574.6	20,562.8
Total inward[4]	**5,764.8**	**7,115.1**	**8,588.6**	**9,106.3**	**11,133.0**
Remitted via:					
Banks	4,984.6	6,134.4	7,267.2	7,226.5	8,630.5
Money services business licensees	780.2	980.7	1,321.4	1,879.8	2,502.5
As at end of period					
No. of remittance service providers	**77**	**77**	**76**	**76**	**79**
Commercial banks and Islamic banks	43	43	43	43	43
Development financial institutions	2	3	3	3	3
Licensed non-bank remittance service providers	32	31	30	30	33

1 Refers to total funds remitted from Malaysia to other countries for workers' remittances and remuneration for employees
2 Remittance transactions adjusted for funds channelled through Malaysia from a country of origin to another destination country. These funds comprise primarily the international worker remittances conducted via the MSB licensees approved under the Money Services Business Act (MSBA) 2011
3 Refers to non-bank remittance service providers and development financial institutions licensed under the MSBA 2011
4 Refers to total funds remitted from other countries to Malaysia for workers' remittances and remuneration for employees

Source: International Transactions Information System (ITIS) and Money Services Business Statistical Report on Remittance Business

Table A.22

Basic Payments Indicators

	2013	2014	2015	2016	2017
Population (million)	30.2	30.7	31.2	31.6	32.1
GDP (RM million)	1,018,614	1,106,443	1,157,723	1,230,120	1,352,477
Cash in circulation (CIC) (RM million)	62,710.2	68,029.4	76,642.9	85,460.3	92,347.6
Transaction Volume Per Capita (unit):					
Cheque[1]	6.5	5.8	4.7	4.2	3.7
E-payments:	63.6	70.9	82.6	97.5	110.6
Credit card	11.0	11.3	11.5	12.1	12.7
Charge card	0.1	0.1	0.1	0.1	0.1
Debit card	1.6	2.2	2.9	3.4	5.1
E-money	34.7	38.3	44.4	52.6	58.1
Other cashless instruments[2]	1.0	1.0	1.1	1.6	0.9
Interbank GIRO	2.8	3.7	4.8	5.5	6.1
Instant Transfer	0.5	0.9	1.5	2.6	4.1
Direct Debit[3]	…	…	0.1	0.1	0.1
ATM[4]	1.0	1.1	1.5	1.4	1.3
Internet banking[5]	7.2	8.6	10.7	13.2	15.9
Mobile banking[5]	0.5	0.7	0.9	1.4	2.6
Mobile payment[6]	-	-	-	-	…
RENTAS - Third party transactions[7]	0.1	0.1	0.1	0.1	0.1
Intrabank direct debit and standing instructions[8]	3.0	2.9	3.1	3.2	3.4
Transaction Value Per Capita (RM):					
CIC	2,075.5	2,215.3	2,457.6	2,701.5	2,881.4
Cheque[1]	68,163.9	63,115.6	57,555.8	52,645.9	50,324.9
E-payments:	535,808.0	563,894.6	549,629.4	550,665.3	613,632.1
Credit card	3,300.9	3,435.4	3,612.6	3,746.8	3,918.5
Charge card	239.1	278.8	286.3	308.2	342.5
Debit card	379.1	481.5	640.0	713.3	930.1
E-money	162.8	172.1	192.2	243.1	283.8
Other cashless instruments[2]	4.3	3.2	3.3	4.8	3.1
Interbank GIRO	9,441.6	14,085.0	20,411.9	24,266.0	29,055.0
Instant Transfer	465.1	827.0	1,664.4	3,398.3	5,390.9
Direct Debit[3]	372.4	481.8	619.2	798.4	997.1
ATM[4]	1,355.9	1,232.9	1,308.2	1,296.0	1,228.6
Internet banking[5]	74,809.0	87,188.1	102,888.5	100,424.6	126,745.6
Mobile banking[5]	257.8	395.0	500.8	737.0	988.4
Mobile payment[6]	-	-	-	-	0.5
RENTAS - Third party transactions[7]	424,296.4	443,175.6	407,481.8	404,468.0	433,095.2
Intrabank direct debit and standing instructions[8]	20,723.7	12,138.2	10,020.2	10,260.8	10,652.6
Turnover to GDP:					
CIC (%)	6.2	6.1	6.6	6.9	6.8
Cheque[1] (times)	2.0	1.8	1.6	1.4	1.2
E-payments (times):	15.9	15.7	14.8	14.2	14.5
% of GDP:					
Credit card	9.8	9.5	9.7	9.6	9.3
Charge card	0.7	0.8	0.8	0.8	0.8
Debit card	1.1	1.3	1.7	1.8	2.2
E-money	0.5	0.5	0.5	0.6	0.7
Other cashless instruments[2]	…	…	…	…	…
Interbank GIRO	28.0	39.1	55.0	62.4	68.9
Instant Transfer	1.4	2.3	4.5	8.7	12.8
Direct Debit[3]	1.1	1.3	1.7	2.1	2.4
ATM[4]	4.0	3.4	3.5	3.3	2.9
Internet banking[5]	221.9	242.0	277.2	258.3	300.4
Mobile banking[5]	0.8	1.1	1.3	1.9	2.3
Mobile payment[6]	-	-	-	-	…
RENTAS - Third party transactions[7] (times)	12.6	12.3	11.0	10.4	10.3
Intrabank direct debit and standing instructions[8]	61.5	33.7	27.0	26.4	25.2

1 Cheques cleared via eSPICK
2 Refer to single purpose payment cards
3 Refer to interbank direct debit transactions
4 Refer to payment transactions via ATM, including own and third party funds transfer. Exclude cash withdrawals
5 Exclude non-financial transactions, payment card transactions and interbank funds transfer (IBG, Instant Transfer and RENTAS third party transactions) performed online
6 Refer to payment service offered by banking institutions that facilitates payments or funds transfer using a mobile device (e.g. mobile phone etc.). Exclude transactions using payment card and mobile banking transactions. Transactions made using mobile payment service offered by non-bank e-money issuers are captured under `E-money´
7 Refer to Government, custom duty and third party payments via Interbank Funds Transfer System. Third party payment refers to transaction with a minimum amount of RM10,000, where the beneficiary or ordering party is a non-RENTAS member
8 Refer to payments that are directly debited by the banks from the current and savings account
… Negligible
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia and Department of Statistics, Malaysia

Table A.23

Cashless Payment Instruments: Transaction Volume

	2013	2014	2015	2016	2017	2016	2017
	Million					% Annual change	
Cheque[1]	**197.1**	**177.1**	**148.0**	**133.1**	**119.0**	**-10.0**	**-10.6**
Credit card	**332.4**	**345.7**	**359.6**	**383.8**	**406.5**	**6.7**	**5.9**
Charge card	**4.1**	**4.4**	**4.2**	**4.1**	**4.7**	**-1.3**	**13.4**
Debit card	**49.4**	**68.7**	**90.1**	**107.6**	**162.3**	**19.4**	**50.9**
International debit	*41.9*	*60.4*	*79.6*	*91.1*	*118.0*	*14.3*	*29.6*
Domestic debit	*7.4*	*8.4*	*10.4*	*16.5*	*44.3*	*58.0*	*168.2*
E-money	**1,048.0**	**1,175.0**	**1,384.7**	**1,663.2**	**1,861.7**	**20.1**	**11.9**
Card-based	*1,028.0*	*1,153.0*	*1,361.0*	*1,637.8*	*1,837.8*	*20.3*	*12.2*
Network-based	*20.1*	*22.0*	*23.7*	*25.4*	*23.9*	*6.9*	*-5. 7*

[1] Cheques cleared via eSPICK
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.24

Cashless Payment Instruments: Transaction Value

	2013	2014	2015	2016	2017	2016	2017
	RM million					% Annual change	
Cheque[1]	**2,059,504**	**1,938,218**	**1,794,937**	**1,665,401**	**1,612,912**	**-7.2**	**-3.2**
Credit card	**99,733**	**105,498**	**112,664**	**118,526**	**125,589**	**5.2**	**6.0**
Charge card	**7,223**	**8,560**	**8,929**	**9,749**	**10,978**	**9.2**	**12.6**
Debit card	**11,454**	**14,785**	**19,960**	**22,565**	**29,809**	**13.1**	**32.1**
International debit	*7,092*	*10,042*	*14,215*	*15,837*	*17,721*	*11.4*	*11.9*
Domestic debit	*4,362*	*4,743*	*5,745*	*6,728*	*12,088*	*17.1*	*79.7*
E-money	**4,919**	**5,284**	**5,995**	**7,689**	**9,095**	**28.2**	**18.3**
Card-based	*3,361*	*3,837*	*4,537*	*5,960*	*7,087*	*31.4*	*18.9*
Network-based	*1,557*	*1,447*	*1,458*	*1,729*	*2,008*	*18.6*	*16.1*

[1] Cheques cleared via eSPICK
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.25

Payment Systems: Transaction Volume and Value

	2013	2014	2015	2016	2017	2016	2017
	Million/RM billion					% Annual change	
RENTAS[1]							
Transaction volume	4.0	4.4	4.4	4.4	4.6	1.0	2.3
Transaction value	46,437.7	49,127.4	53,572.4	51,538.8	53,749.9	-3.8	4.3
Interbank GIRO							
Transaction volume	83.4	113.6	149.1	174.1	196.7	16.8	13.0
Transaction value	285.3	432.5	636.6	767.6	931.2	20.6	21.3
	'000/RM million					% Annual change	
FPX[2]							
Transaction volume	2,211.7	3,099.7	4,648.8	8,655.6	33,173.9	86.2	283.3
Transaction value	1,372.2	4,191.4	8,602.5	14,784.4	28,910.3	71.9	95.5
Direct Debit							
Transaction volume	924.2	1,278.4	1,678.7	1,982.4	2,980.3	18.1	50.3
Transaction value	11,251.9	14,796.2	19,310.7	25,255.8	31,958.0	30.8	26.5

1 Malaysia's large-value payment system, Real-time Electronic Transfer of Funds and Securities System
2 Financial Process Exchange
Source: Bank Negara Malaysia

Table A.26

Payment and Securities Transactions Handled by RENTAS

Transaction Volume	2013	2014	2015	2016	2017	2016	2017
	'000					% Annual change	
Total	**3,967.1**	**4,367.2**	**4,403.4**	**4,449.3**	**4,550.8**	**1.0**	**2.3**
IFTS[1]	**3,847.7**	**4,257.3**	**4,284.1**	**4,320.5**	**4,440.8**	**0.9**	**2.8**
Money market operations	87.3	88.1	86.8	84.5	80.6	-2.6	-4.6
Foreign exchange settlement	100.0	107.6	126.8	126.3	110.2	-0.4	-12.7
of which: USD CHATS[2]	*47.8*	*53.7*	*63.0*	*55.8*	*36.8*	*-11.4*	*-34.1*
Third party transactions	3,020.2	3,383.8	3,317.5	3,445.6	3,696.8	3.9	7.3
Others	640.2	677.8	753.0	664.2	553.2	-11.8	-16.7
SSDS[3]	**119.4**	**110.0**	**119.3**	**128.8**	**110.0**	**8.0**	**-14.6**
Transaction Value	RM billion						
Total	**46,437.7**	**49,127.4**	**53,572.4**	**51,538.8**	**53,749.9**	**-3.8**	**4.3**
IFTS[1]	**43,903.3**	**46,743.1**	**51,332.7**	**49,585.5**	**52,206.0**	**-3.4**	**5.3**
Money market operations	18,656.7	18,935.5	23,741.9	24,118.9	25,593.3	1.6	6.1
Foreign exchange settlement	3,839.6	4,966.6	5,190.4	4,941.8	5,849.9	-4.8	18.4
of which: USD CHATS[2]	*2,594.8*	*3,595.2*	*3,700.9*	*3,877.8*	*4,145.5*	*4.8*	*6.9*
Third party transactions	12,819.7	13,609.5	12,707.7	12,794.9	13,880.7	0.7	8.5
Others	8,587.2	9,231.5	9,692.7	7,729.8	6,882.0	-20.3	-11.0
SSDS[3]	**2,534.5**	**2,384.3**	**2,239.7**	**1,953.3**	**1,544.0**	**-12.8**	**-21.0**
Turnover to GDP (times)	**45.6**	**44.4**	**46.3**	**41.9**	**39.7**		
Daily Average:							
Transaction volume ('000)	16.1	17.8	17.9	18.0	18.7		
Transaction value (RM billion)	188.0	199.7	217.8	208.7	220.3		

1 Interbank Funds Transfer System
2 Payment versus Payment (PvP) link established in 2006, for interbank settlement of ringgit-US dollar trades through RENTAS USD CHATS
3 Scripless Securities Depository System for Malaysian Government Securities, Treasury bills, and scripless public debt securities
Note: Figures may not necessarily add up due to rounding
Source: Bank Negara Malaysia and Department of Statistics, Malaysia

Table A.27

Payment Channels: Transaction Volume and Value

Transaction Volume	2013	2014	2015	2016	2017	2016	2017
	Million					% Annual change	
Internet banking[1]	269.8	350.7	453.8	589.0	743.5	29.8	26.2
Individual	*194.8*	*252.2*	*323.1*	*435.4*	*554.6*	*34.7*	*27.4*
Corporate	*75.0*	*98.5*	*130.6*	*153.6*	*188.8*	*17.6*	*22.9*
Mobile banking[1]	16.1	23.3	32.0	55.8	106.1	74.3	90.1
ATM[2]	42.4	51.3	68.6	71.3	71.6	3.9	0.4
Transaction Value	RM million						
Internet banking	3,457,627	4,108,271	4,718,110	5,217,165	6,502,850	10.6	24.6
Individual	*224,852*	*304,177*	*352,176*	*464,693*	*622,507*	*31.9*	*34.0*
Corporate	*3,232,775*	*3,804,094*	*4,365,934*	*4,752,472*	*5,880,343*	*8.9*	*23.7*
Mobile banking	9,243	14,677	20,693	33,161	48,349	60.3	45.8
ATM[2]	40,987	52,047	57,529	65,273	67,385	13.5	3.2

[1] Exclude non-financial transactions
[2] Refer to payment transactions via ATM, including own and third party funds transfer. Exclude cash withdrawals
Note: Figures may not necessarily add up due to rounding

Source: Bank Negara Malaysia

Table A.28

Payment Transactions by Channels

Transaction Volume	2016			2017		
	Internet banking	Mobile banking	ATM	Internet banking	Mobile banking	ATM
	Million					
Funds transfer	324.4	33.7	57.2	438.0	67.0	57.4
Bill payment[1]	102.1	5.9	2.6	100.6	9.2	2.6
Investment in share and unit trust	6.3	...	0.1	7.8	...	0.1
Re-load	27.3	11.9	2.1	31.7	23.7	1.8
Card and loan repayment	29.9	3.4	9.3	32.9	5.2	9.7
Transaction Value	RM million					
Funds transfer	3,662,410	27,513	53,467	4,804,646	40,334	54,395
Bill payment[1]	26,895	926	774	35,344	1,510	957
Investment in share and unit trust	54,697	...	1,246	78,636	...	1,385
Re-load	546	201	111	599	359	87
Card and loan repayment	40,026	3,973	9,443	46,964	5,567	10,411

[1] Include insurance payments
... Negligible

Source: Bank Negara Malaysia

Table A.29

ATM Cash Withdrawals in Malaysia

	2013	2014	2015	2016	2017	2016	2017
	Million					% Annual change	
Volume of cash withdrawals	626.2	687.8	705.9	761.2	763.9	7.8	0.3
	RM million						
Value of cash withdrawals	310,446.4	339,725.6	354,732.3	389,485.3	396,956.7	9.8	1.9
Average value per transaction (RM)	495.7	493.9	502.5	511.6	519.7	1.8	1.6

Source: Bank Negara Malaysia

Table A.30

Number of Electronic Funds Transfer at Point-of-Sale (EFTPOS) Terminals

As at end of period	2013	2014	2015	2016	2017
	Unit				
Total terminals[1]	227,156	233,248	278,266	326,507	407,111
Terminals per 1,000 inhabitants	8	8	9	10	13

[1] Terminals that accept international brand payment card and/or domestic brand debit cards. Include terminals acquired by non-bank acquirers

Source: Bank Negara Malaysia

Table A.31

Number of Cards and Users of Payment Instruments and Channels

As at end of period	2013	2014	2015	2016	2017	2016	2017
	'000					% Annual change	
Number of cards/accounts:							
Credit card	8,128	8,048	8,612	9,178	9,861	6.6	7.4
Charge card	155	142	143	130	129	-8.9	-0.6
Debit card	38,226	40,109	42,192	43,669	44,108	3.5	1.0
Standalone international debit[1]	*5,519*	*6,256*	*6,030*	*583*	*219*	*-90.3*	*-62.5*
Standalone domestic debit[2]	*17,363*	*15,455*	*14,544*	*11,844*	*6,727*	*-18.6*	*-43.2*
Co-badged[3]	*15,344*	*18,398*	*21,618*	*31,241*	*37,162*	*44.5*	*19.0*
E-money	97,735	45,557	55,825	60,712	67,387	8.8	11.0
Number of subscribers:							
Internet banking	15,524	17,600	19,751	22,774	25,526	15.3	12.1
Individual	*15,225*	*17,254*	*19,176*	*22,021*	*24,579*	*14.8*	*11.6*
Corporate	*299*	*346*	*575*	*753*	*947*	*31.0*	*25.6*
Penetration rate to population (%)	*51.4*	*57.3*	*63.3*	*72.0*	*79.6*		
Mobile banking	4,379	5,639	7,279	8,946	11,480	22.9	28.3
Penetration rate to population (%)	*14.5*	*18.4*	*23.3*	*28.3*	*35.8*		

[1] A debit card with an international brand debit network application (e.g. Visa and MasterCard)
[2] A debit card with the domestic brand debit network application, i.e. MyDebit
[3] A debit card with two payment card network applications or brands

Source: Bank Negara Malaysia

Table A.32

Number of Participants and Instrument Issuers[1]

As at end of period	2013	2014	2015	2016	2017
	Unit				
RENTAS	**68**	**67**	**67**	**68**	**68**
Bank Negara Malaysia	*1*	*1*	*1*	*1*	*1*
Banks	*55*	*54*	*54*	*55*	*54*
DFIs	*6*	*6*	*6*	*6*	*6*
Non-banks	*6*	*6*	*6*	*6*	*7*
eSPICK	**47**	**46**	**46**	**47**	**46**
Credit card	**25**	**26**	**27**	**27**	**27**
Banks	*22*	*23*	*24*	*25*	*25*
Non-banks	*3*	*3*	*3*	*2*	*2*
Debit card[2]	**21**	**21**	**22**	**28**	**29**
Standalone international debit[3]	*9*	*9*	*9*	*7*	*7*
Standalone domestic debit[4]	*12*	*11*	*7*	*2*	*2*
Co-badged[5]	*12*	*14*	*14*	*24*	*27*
Charge card	**8**	**7**	**7**	**7**	**7**
Banks	*7*	*6*	*6*	*7*	*7*
Non-banks	*1*	*1*	*1*	-	-
E-money[6]	**25**	**24**	**23**	**28**	**31**
Banks	*6*	*7*	*5*	*5*	*5*
Non-banks	*19*	*17*	*18*	*23*	*26*
Internet banking	**29**	**30**	**30**	**30**	**30**
Mobile banking	**13**	**13**	**13**	**13**	**17**
FPX[7]	**12**	**13**	**16**	**22**	**22**
Banks	*9*	*10*	*13*	*18*	*18*
Non-banks	*3*	*3*	*3*	*4*	*4*
Direct Debit	**17**	**17**	**14**	**14**	**19**
Banks	*14*	*14*	*14*	*14*	*19*
Non-banks	*3*	*3*	-	-	-
Interbank GIRO	**29**	**30**	**30**	**30**	**29**

[1] Refer to participants and issuers which have commenced their business operations
[2] The figures may not add up as there are banks issuing more than one type of debit card
[3] A debit card with an international brand debit network application (e.g. Visa and Mastercard)
[4] A debit card with the domestic brand debit network application, i.e. MyDebit
[5] A debit card with two payment card network applications or brands
[6] Include international brand prepaid card
[7] Financial Process Exchange

Source: Bank Negara Malaysia

Glossary, Acronyms and Abbreviations

Glossary

Agent banking
The provision of banking services to customers through a third-party agent, such as retail outlets and post offices.

Capital adequacy ratio (CAR)
A measure of a financial institution's capital, expressed as the ratio of capital to risk.

Capital Conservation Buffer (CCB)
A capital buffer intended to encourage the build-up of capital buffers by individual banks during normal times that can be drawn down during stress periods.

Cash-to-short-term debt (CASTD) ratio
Ratio of a corporation's cash to short-term debt, which measures liquidity.

Common equity tier 1 (CET1)
A component of a bank's regulatory capital comprising ordinary shares issued by a banking institution, share premium, retained earnings and other reserves.

Countercyclical Capital Buffer (CCyB)
A capital buffer intended to protect the banking sector as a whole from the build-up of systemic risk during an economic upswing when aggregate credit growth tends to be excessive.

Debt service ratio (DSR)
Ratio of total monthly bank and non-bank debt obligations to monthly disposable income (net of statutory deductions).

Debt-at-risk – household
Proportion of debt of borrowers with negative financial margin to total household debt, adjusted for eligible collateral.

Debt-at-risk – non-financial corporation
Proportion of debt held by corporations with an interest coverage ratio of less than two times to total corporate debt.

Digital currency
A digital representation of value that functions as a medium of exchange and is interchangeable with any money (including through the crediting or debiting of an account), but excludes electronic money.

Domestic banking group (DBG)
Domestically-owned financial group comprising a licensed bank, licensed investment bank and licensed Islamic bank.

e-Payment Incentive Fund (ePIF)
A framework implemented by the Bank in 2015 which requires banks to channel a part of cheque processing fees collected towards providing incentives for customers to migrate to e-payments.

Financial margin (FM)
Borrowers' monthly disposable income (after deducting debt repayments and expenditures on basic necessities) and liquid financial assets.

Gross interest/finance margin
Interest income net of interest expenses as a percentage of total interest-related assets.

Gross premiums and contributions
Premiums/contributions receivable before deduction of commissions, brokerage or other expenses covering all direct general insurers and takaful operators and general reinsurers/retakaful operators.

Household financial assets
Assets that are held by households including deposits, investments in unit trust funds and equities, insurance/takaful policies and Employees Provident Fund (EPF) contributions.

Household liquid financial assets (LFA)
Household financial assets excluding EPF contributions.

Interest coverage ratio (ICR)
Ratio of a corporation's earnings before interest, taxes, depreciation and amortisation to interest expense, which measures debt servicing capacity.

Interoperability
Ability for payments to be processed across multiple payment service providers facilitated by the adoption of common standards and/or technical compatibility.

Investment-linked products
Life insurance or family takaful where the policy/certificate value at any time varies according to the value of the underlying assets at the time.

Leverage ratio – banking
The ratio of 'tier 1 capital' to the 'on- and off-balance sheet exposures' of a bank.

Leverage ratio – household
Ratio of total outstanding debt to borrowers' annual gross income.

Liquidity Coverage Ratio (LCR)
The ratio of 'high-quality liquid assets (HQLA)' to the 'expected net cash outflows' of a bank over the next 30 calendar days.

Loan-to-deposit (LTD) ratio
Ratio of total loans to deposits, excluding loans sold to Cagamas, interbank placements, and loans backed by Islamic investment accounts.

Loan-to-fund (LTF) ratio
Ratio of total loans to deposits and debt instruments, excluding loans sold to Cagamas, interbank placements, and loans funded by Islamic investment accounts.

Locally-incorporated foreign bank (LIFB)
Foreign-owned licensed bank or licensed Islamic bank that is incorporated in Malaysia.

Loss given default (LGD)
Percentage of an outstanding claim on a counterparty that will likely not be recovered in the event of a default.

Loss ratio
The ratio of net claims incurred to earned premium/contribution income, covering all direct general insurers and takaful operators and general reinsurers/retakaful operators.

Merchant discount rate (MDR)
A fee payable by a merchant to an acquirer for facilitating a payment card transaction. It comprises the interchange fee (a fee payable by an acquirer to an issuer in a payment card transaction), the processing fee and other fees imposed by an operator of a payment card network, other costs incurred by the acquirer and the acquirer's margin.

Net impaired loans/financing ratio
The ratio of impaired loans/financing net of specific provisions to total loans/financing net of specific provisions.

Net interest/finance margin
Interest income net of interest expenses and non-interest expenses (such as staff cost, overheads and provisions) as a percentage of total interest-related assets.

Net interest/finance income
Interest/financing income net of interest/financing expenses.

Net Stable Funding Ratio (NSFR)
The ratio of a bank's available stable funding (ASF) to the required stable funding (RSF), where ASF refers to funding sources weighted according to their stability, and RSF refers to assets and other off-balance sheet exposures weighted according to their liquidity.

New premiums/contributions – life insurance and family takaful
Premiums/contributions acquired from new policies/certificates for a particular year.

Non-deliverable forward (NDF)
A forward contract that is traded offshore and does not involve an exchange of two currencies upon maturity.

Non-financial corporation
A corporation whose principal activity is the production of goods and/or non-financial services.

Operating profits/loss
Sum of underwriting profits/loss, net investment and other income, covering all direct general insurers and takaful operators and general reinsurers/retakaful operators.

Overhang of property units
Completed property units with Certificate of Completion and Compliance which remain unsold for more than nine months after being in the market.

Participating products
An insurance/takaful product which shares in the distributable surplus of a life insurer/family takaful operator by acquiring bonuses or dividends.

Penetration rate
The percentage of Malaysian citizens who own an individual life insurance policy or family takaful certificate, after eliminating duplicates from multiple policies.

Portfolio flows
Cross-border transactions involving the purchase/sale of debt or equity securities.

Probability of default (PD)
Likelihood of a counterparty defaulting on its contractual obligations to a financial institution over a given time horizon.

Regulatory Sandbox
A framework that allows for the experimentation of innovative fintech solutions in a live market environment within specified parameters and timeframes.

Retention ratio
The ratio of gross premiums/contributions less reinsurance/retakaful ceded, to gross premiums/contributions, covering all direct general insurers and takaful operators and general reinsurers/retakaful operators.

Risk-weighted assets (RWA)
A measure of a bank's risk exposures.

Sukuk
Debt security structured under any Shariah compliant contract.

Surplus arising
Life insurer and family takaful operator's change in surpluses over a particular period, where surplus is the excess of policyholders'/participants' risk fund over net policy/certificate liabilities.

Tier 1
A component of a bank's regulatory capital comprising the sum of CET1 and additional tier 1 capital.

Total capital
A bank's total regulatory capital comprising the sum of CET1, additional tier 1 and tier 2 capital.

Underwriting profits/loss
Earned premium/contribution income less net claims incurred, commissions and management expenses, covering all direct general insurers and takaful operators and general reinsurers/retakaful operators.

Vintage default rate
Rate of loan defaults tracked and grouped by origination period.

Acronyms and Abbreviations

AAOIFI	Accounting and Auditing Organization for Islamic Financial Institutions
AICB	Asian Institute of Chartered Bankers
AIIF	ASEAN Insurance Integration Framework
AKPK	Credit Counselling and Debt Management Agency (Agensi Kaunseling dan Pengurusan Kredit)
API	application programming interface
ASAS	Association of Shariah Advisors in Islamic Finance Malaysia
ATM	automated teller machine
BCBS	Basel Committee on Banking Supervision
CAGR	compounded annual growth rate
CAR	capital adequacy ratio
CCA	Consumer Credit Act
CCBS	Cross-currency basis swap
CCRIS	Central Credit Reference Information System
CDD	customer due diligence
CDRC	Corporate Debt Restructuring Committee
CIIF	Chartered Institute of Islamic Finance Professionals
CIS	collective investment scheme
CLM	centralised liquidity management
CNP	card-not-present
CONG	Compliance Officers Networking Group
CoP	Community of Practitioners
CPIF	Chartered Professional in Islamic Finance
CSA	Certified Shariah Advisor
CSP	Certified Shariah Practitioner
CVA	Credit Valuation Adjustment
DFI	development financial institution
DII	domestic institutional investor
DMP	Debt Management Programme
DNFBP	Designated Non-Financial Business and Profession
DRSK	Bloomberg Default Risk
ECL	expected credit loss
eKYC	electronic Know-Your-Customer
EMV	Europay-Mastercard-Visa
EPF	Employees Provident Fund
ePIF	e-Payment Incentive Fund
FC	foreign currency
FCB	Fellow, Chartered Banker
FFW	Fit-for-Work Programme
Fintech	financial technology
FI	financial institution
FMC	Financial Markets Committee
FMSI	Financial Market Stress Index
FSC	Financial Stability Committee
FSP	financial services provider
FSTEP	Financial Sector Talent Enrichment Programme
FX	foreign exchange
GAP	Guaranteed Asset Protection
GDP	gross domestic product
GPS	Global Positioning System
IAIS	International Association of Insurance Supervisors
IAP	Investment Account Platform
IBG	Interbank GIRO
ICS	Global Insurance Capital Standard
ICTF	Interoperable Credit Transfer Framework
IFRS	International Financial Reporting Standards
IIID	Integrated Income Indebtedness Database
INCEIF	International Centre for Education in Islamic Finance
ISRA	International Shariah Research Academy for Islamic Finance
LHDN	Inland Revenue Board Of Malaysia (Lembaga Hasil Dalam Negeri)

LIBOR	London Interbank Offered Rate
LIFB	locally-incorporated foreign bank
LTF	loan-to-fund ratio
MCCS	Malaysian Chip Card Specification
MDF	Market Development Fund
MEPS	Malaysian Electronic Payment System Sdn. Bhd.
MFRS	Malaysian Financial Reporting Standards
MGII	Malaysian Government Investment Issue
MGS	Malaysian Government Security
MHPI	Malaysian House Price Index
MOOC	massive online open course
MSC	Multimedia Super Corridor
MTA	Malaysian Takaful Association
MyClear	Malaysian Electronic Clearing Corporation Sdn. Bhd.
NAMLIFA	National Association of Malaysian Life Insurance and Family Takaful Advisors
NBFI	non-bank financial institution
NCC	National Coordination Committee to Counter Money Laundering
NRD	National Registration Department
OFS	Ombudsman for Financial Services
ORION	Operational Risk Integrated Online Network
P2P	person-to-person
PayNet	Payments Network Malaysia Sdn. Bhd.
PCRF	Payment Card Reform Framework
PIN	personal identification number
POS	point-of-sale
QR	quick response
RBC	Risk-Based Capital Framework for Insurers
RBCT	Risk-Based Capital Framework for Takaful Operators
RENTAS	Real-time Electronic Transfer of Funds and Securities System
SAC	Shariah Advisory Council of Bank Negara Malaysia
SIRC	State Islamic Religious Council
SKM	Malaysia Co-Operative Societies Commission (Suruhanjaya Koperasi Malaysia)
SME	small and medium enterprise
SMS	short message service
SOCSO	Social Security Organisation
STA	Strategic Trade Act
STP	straight-through-processing
STR	suspicious transaction report
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TPFT	third party, fire and theft
VBI	value-based intermediation

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