

Risk Developments and Assessment of Financial Stability in 2017

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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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | | <ul style="list-style-type: none"> 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 | | <ul style="list-style-type: none"> 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 | | <p>Domestic factors:</p> <ul style="list-style-type: none"> No material change in the nature and magnitude of risk transmission from non-bank financial institutions <p>External factors:</p> <ul style="list-style-type: none"> 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 borrowings¹ 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

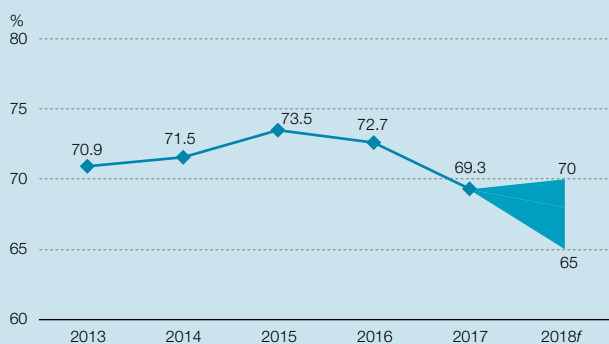
debt declined further, although it remained high at 84.3% (2016: 88.3%) (Chart 1.4). Excluding NBFIs, total banking system loans extended to households also trended lower to 69.3% of GDP (2016: 72.7%). In view of continued income growth amid improved labour market conditions, total banking system loans 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 NBF 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

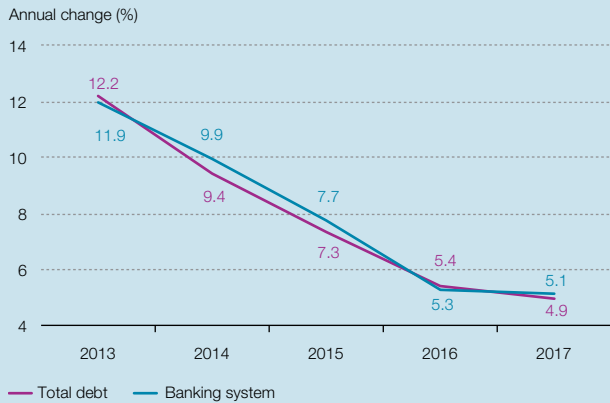


Chart 1.4: Household Sector – Key Ratios

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

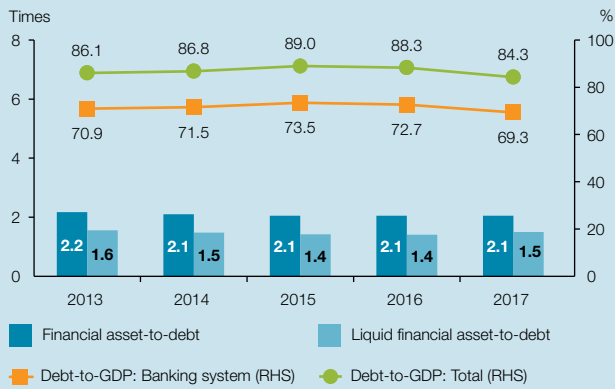
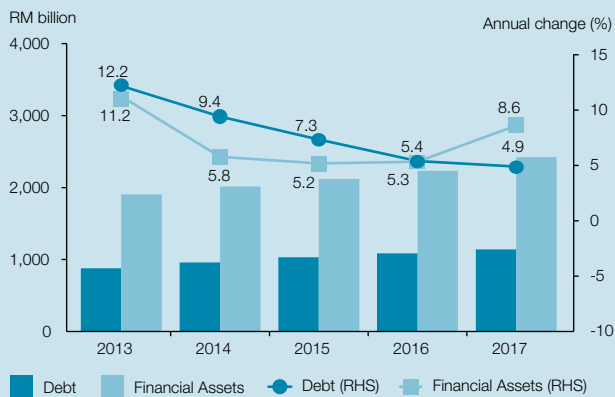


Chart 1.6: Household Sector – Debt and Financial Assets

Growth of household financial assets outpaced that of debt



* Surrender value
 ** Numbers may not necessarily add up due to rounding

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

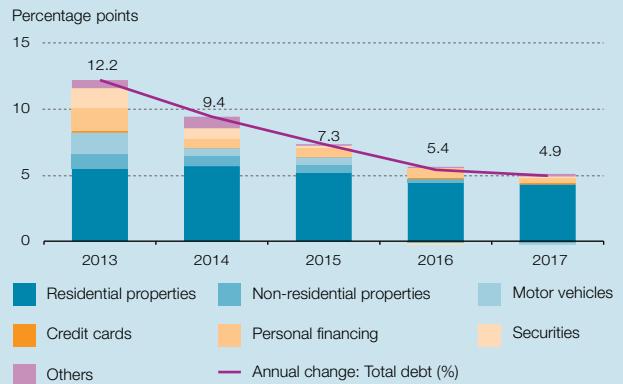


Chart 1.5: Household Sector – Composition of Assets

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

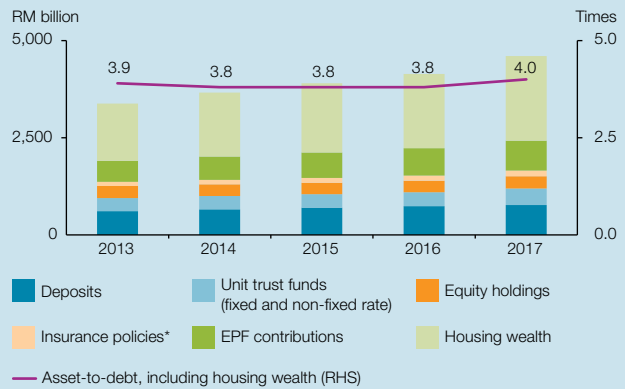
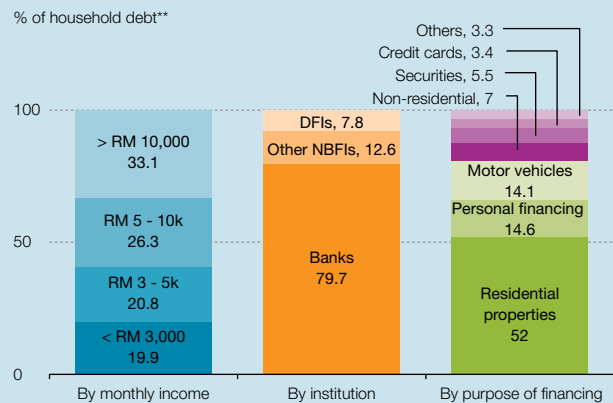


Chart 1.7: Household Sector – Profile of Borrowings

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



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.

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 | 57.6³ |
| | – 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

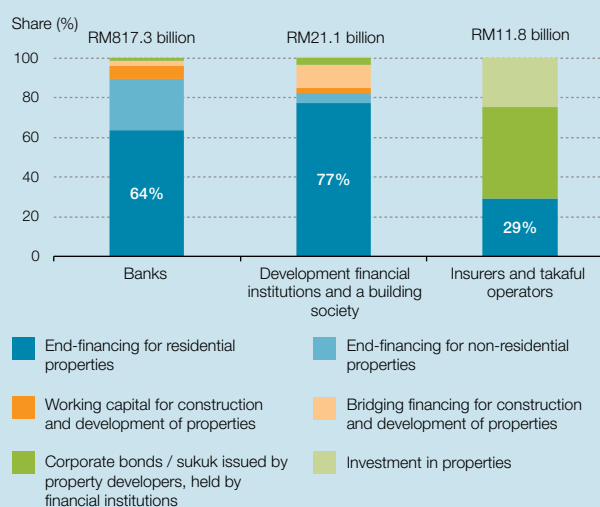
Source: Bank Negara Malaysia

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

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 units² increased on an annual basis by 22.7% (2016: 41%) to 129,052 units³ 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 unaffordable⁴ 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.

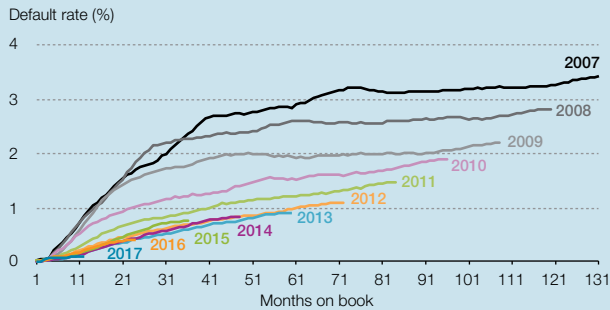
Overall vintage default rates for housing loans originated since 2007 continued to show improvement (Chart 1.9). This reflected the improving credit profile of housing loans in the banking system amid more prudent underwriting standards of banks. Housing delinquencies and impaired loans remained low 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

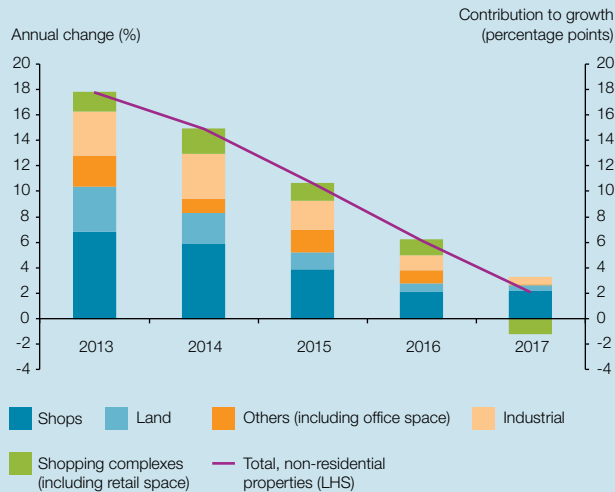
Vintage default rates for housing loans originated since 2007 have shown improvement



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%).

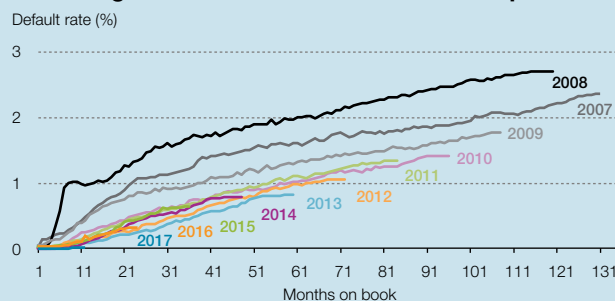
Arising from the oversupply situation, banks have become more cautious in lending to the office space and shopping complex segments, as reflected in the markedly lower

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 bonds⁵ 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 leverage⁶ and debt servicing capacity⁷ 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).

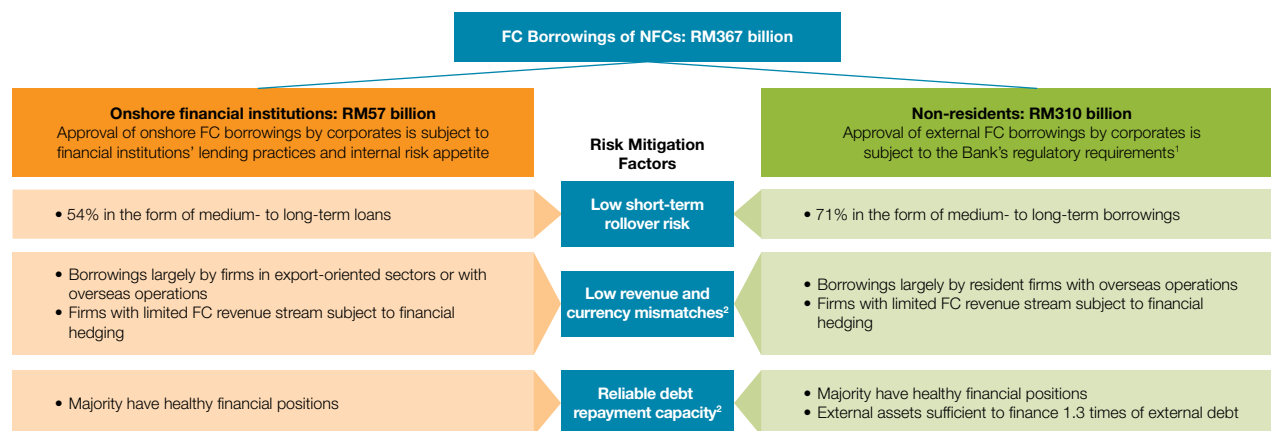
Risks from Corporate Foreign Currency Borrowings

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

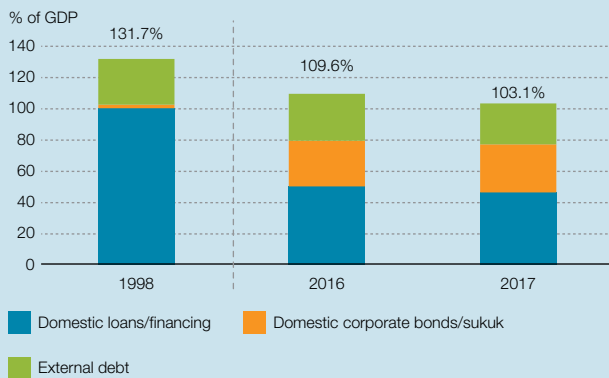


Chart 1.13: Business Sector – FC-denominated Debt Profile

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

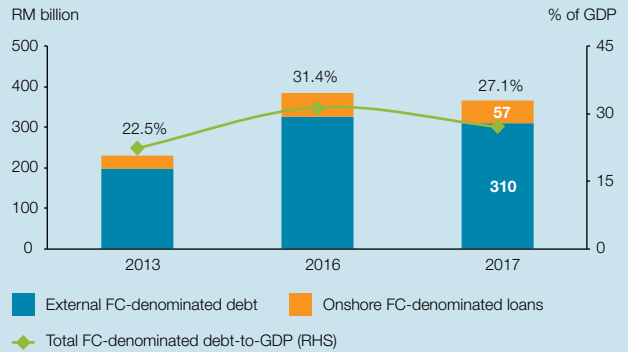
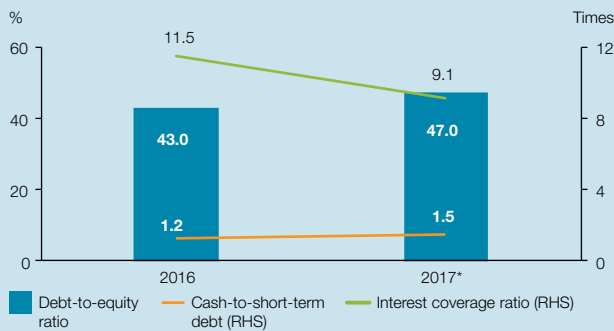


Chart 1.14: Business Sector – Leverage, Debt Servicing Capacity and Liquidity Indicators

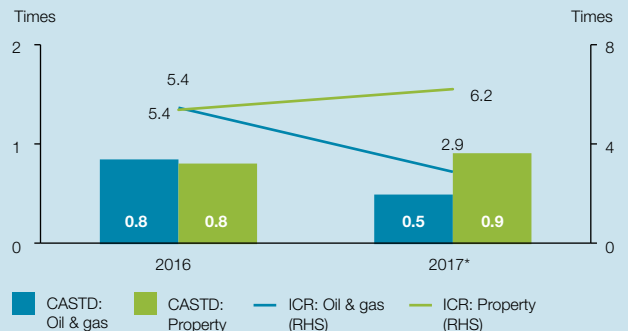
Healthy financials continue to support debt servicing capacity



*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

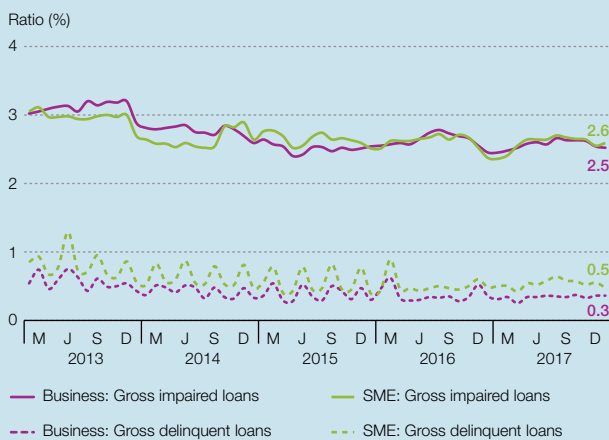
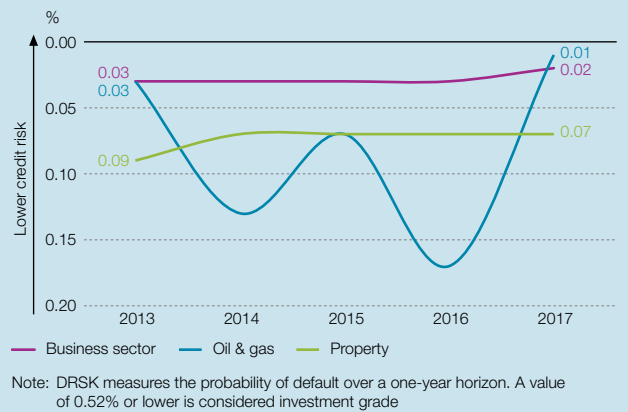


Chart 1.17: Business Sector – Credit Risk Outlook for Selected Sectors

Overall debt servicing capacity is expected to remain intact



Note: DRISK 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

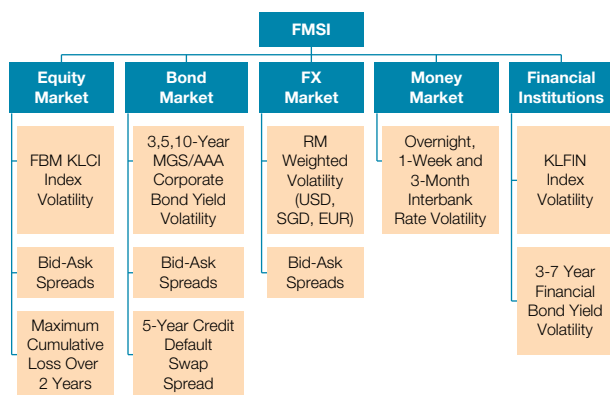
During the year, policy developments in the United States (US), volatility in the commodities market and heightened geopolitical risks, continued to induce bouts of volatility in global portfolio flows. Despite these external developments, the Financial Market Stress Index (FMSI), which measures the 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

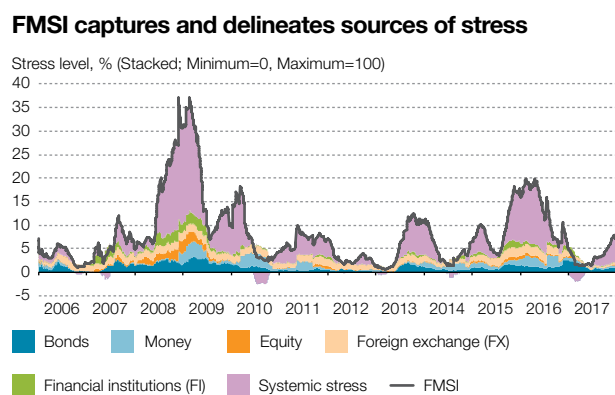
The Financial Market Stress Index (FMSI) was developed in 2013⁸ as a risk monitoring tool for the financial market. It measures current conditions in the domestic financial markets and allows different financial stress events to be compared over time. The FMSI captures financial stress in five domestic 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



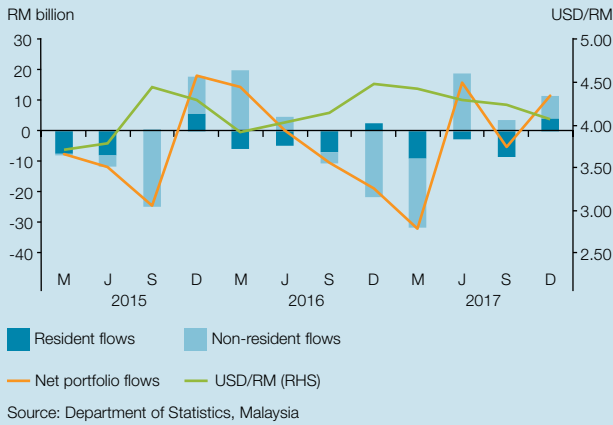
Source: Bloomberg, Reuters and Bank Negara Malaysia estimates

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

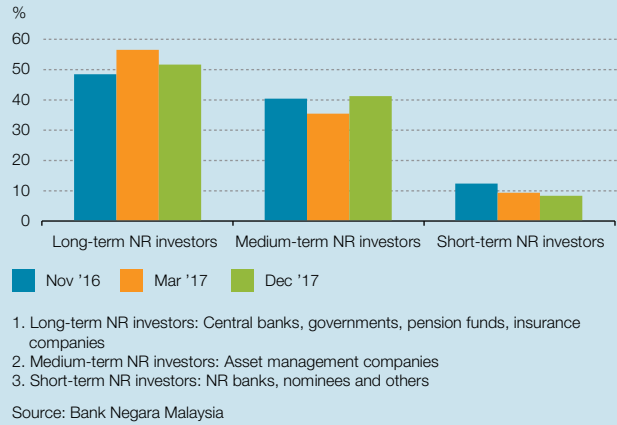


observed since 2015. In the government bond market, the outcome of the US presidential election in November 2016 led to an increase in non-resident outflows. This continued into the first quarter of 2017 as non-residents, especially short-term investors, continued to sell their positions in shorter-term 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

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



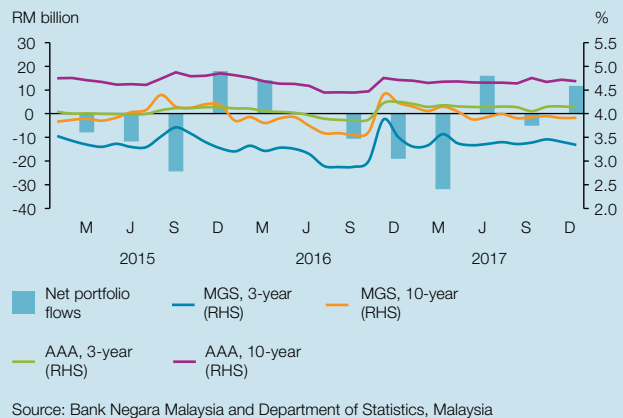
1. Long-term NR investors: Central banks, governments, pension funds, insurance companies
2. Medium-term NR investors: Asset management companies
3. Short-term NR investors: NR banks, nominees and others

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



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

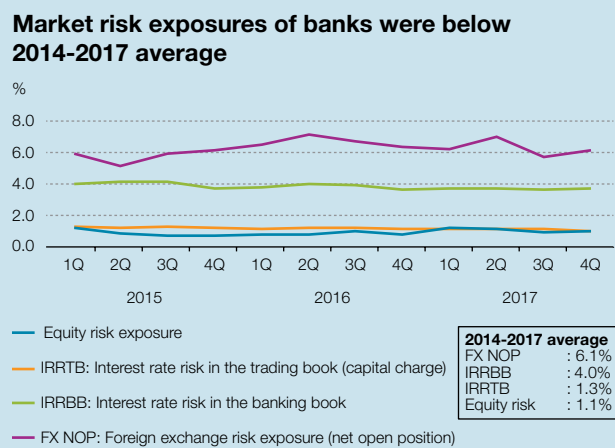
In general, there were no significant shifts in the market risk-taking behaviour of financial institutions. The overall treasury portfolio of banks expanded by 14% to RM421 billion or 16.5% (2016: 15.1%) of total assets, with the bulk of holdings in the banking book. The increase was mainly attributable 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)



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.

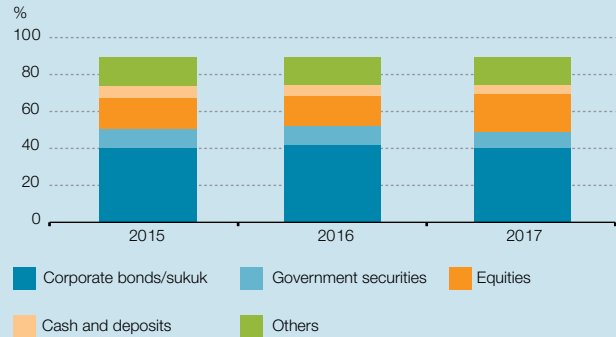
LIQUIDITY AND FUNDING RISK

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

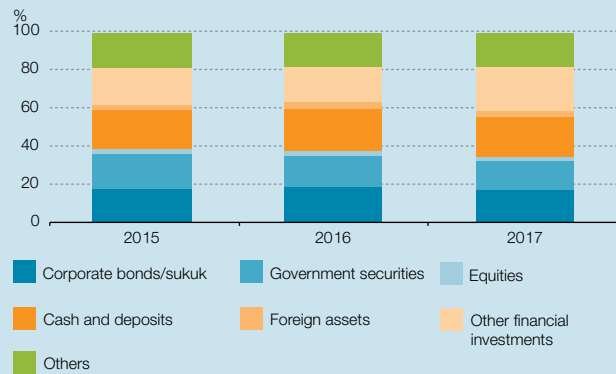
Composition of assets of the life insurance and family takaful sector remained unchanged



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

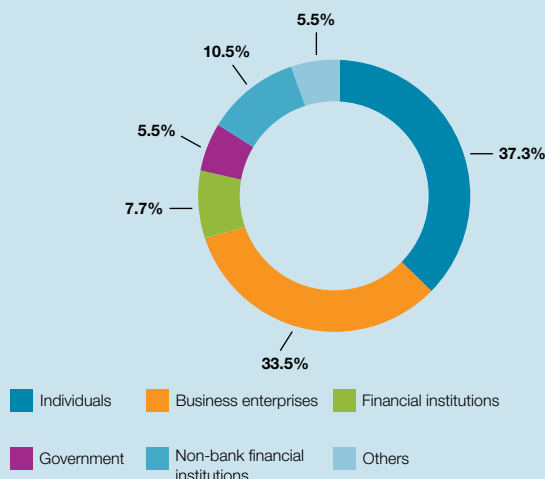
for 69.2% (2016: 69.4%) of total bank equity and all liabilities. The deposits were mainly denominated in ringgit (2017: 93%; 2016: 92.2%). Overall interbank funding and FC-denominated deposits remained low, accounting for 5.6% (2016: 6%) and 4.8% (2016: 5.4%) of total bank funding, respectively. The 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

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

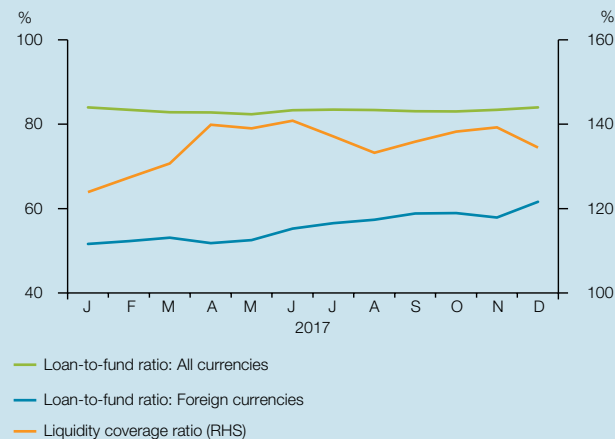
Source: Bank Negara Malaysia

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 1.27: 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.

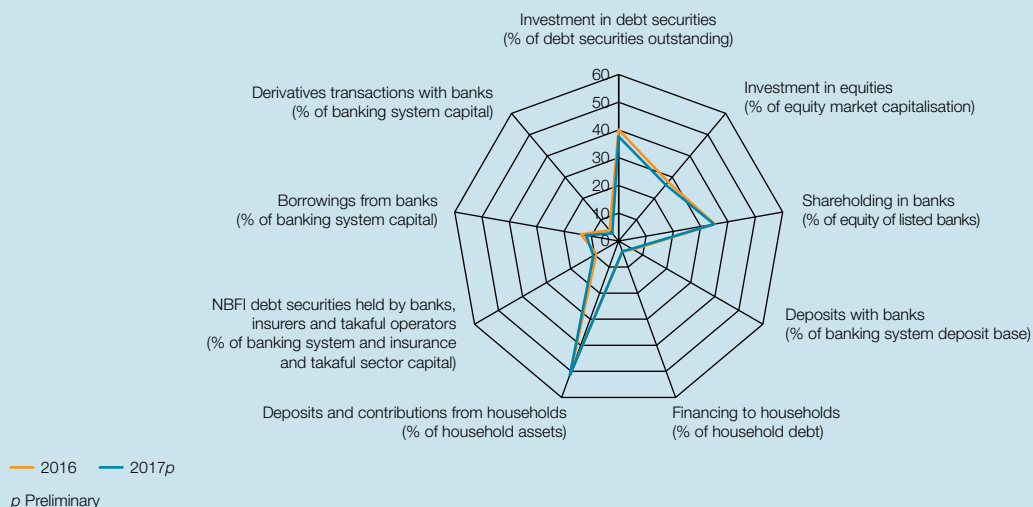
On aggregate, NBFIs held a sizeable share of domestic equities and bonds, amounting to 26.4% of total market capitalisation and 37.6% of total outstanding bonds. In the event of financial stress, large-scale disposal of such assets by NBFIs could induce steep valuation adjustments that would affect overall 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).

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



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.

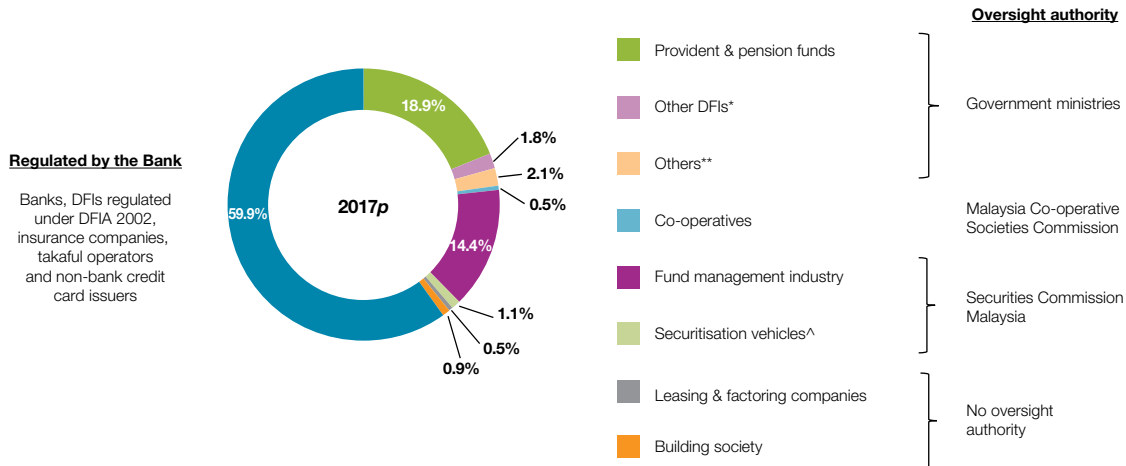
For LIFBs, the bulk of external liabilities continued to be denominated in ringgit (78.1% of total external liabilities) in the form of stable capital funds maintained in Malaysia (30.4%) and securities held under custody

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



^p Preliminary

* 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

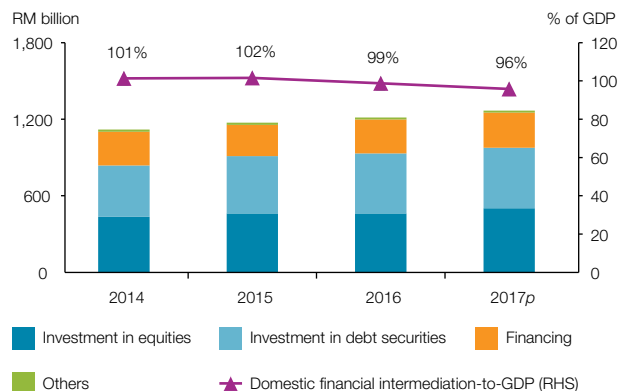
Source: Securities Commission Malaysia, Malaysia Co-operative Societies Commission, published financial statements and Bank Negara Malaysia estimates

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



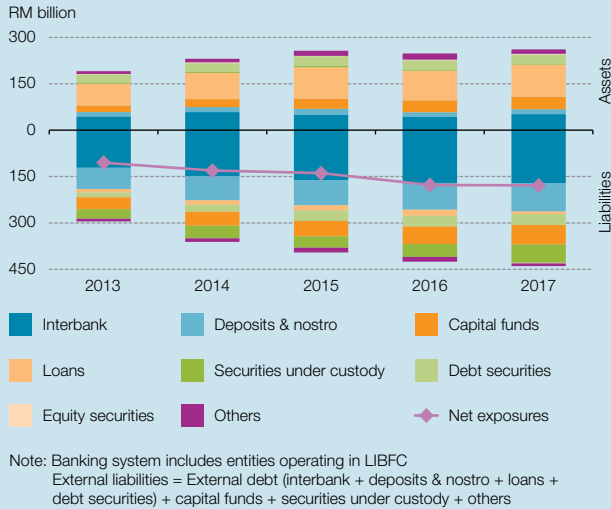
Note: Financial intermediation comprises (i) investment in equities; (ii) investment in debt securities; (iii) financing; (iv) securitisation; and (v) credit guarantee or enhancement

^p Preliminary

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



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

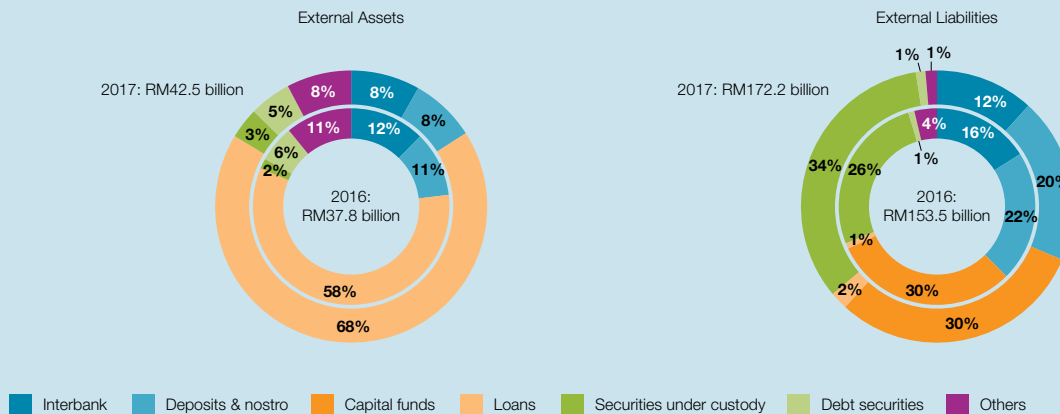
funding raised in international capital markets as part of CLM operations. Other components of DBGs’ external exposures include deposits accepted from non-residents and capital investments in overseas operations (Chart 1.34). LIBFC banks’ exposures are primarily in the form of loans (63.4% of external 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

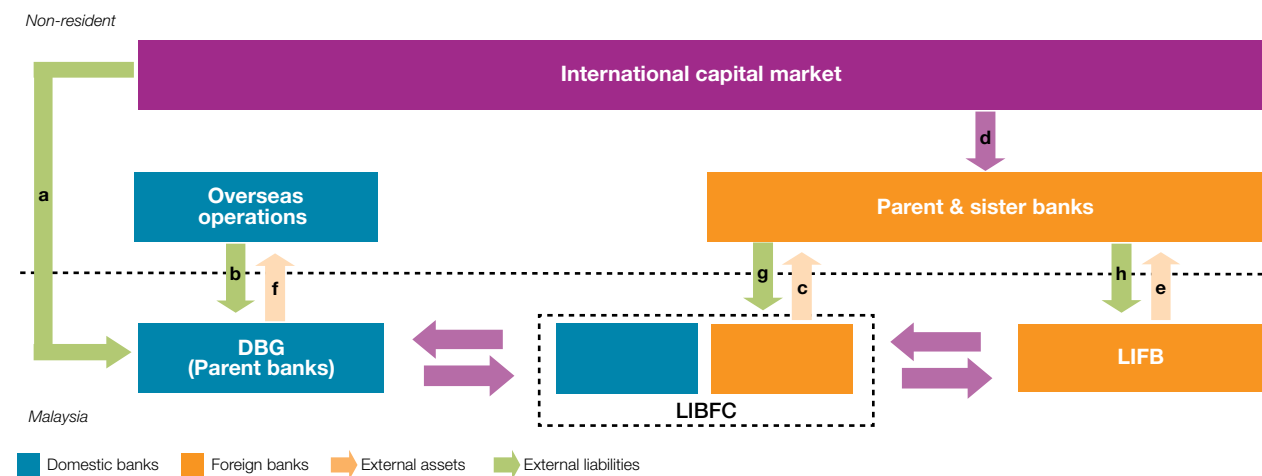


Source: Bank Negara Malaysia

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

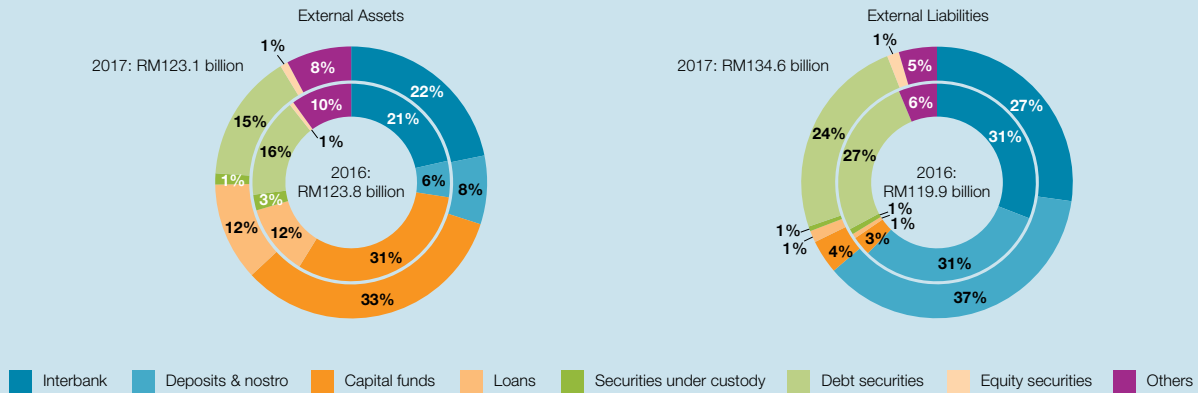
- LIBFC banks are predominantly funded by intra-group borrowings from parent banks or regional offices abroad given their small deposit base.
- Funding and liquidity risks remain limited due to the 'back-to-back' nature of these borrowings (i.e. funding received from the related office typically matches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

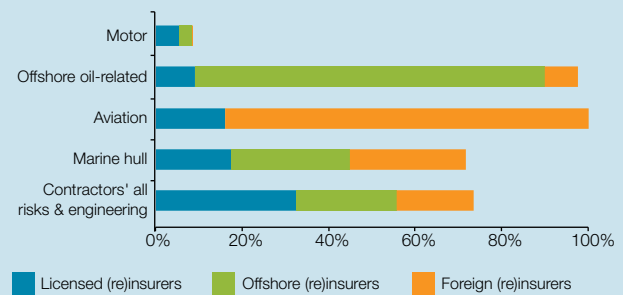
External assets of Malaysian insurers and takaful operators remained small at less than 5% of the industry's total assets and primarily focused on the more liquid equity markets in Asia (Chart 1.37). On aggregate, insurers' ability to further expand their investments abroad is limited given relatively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

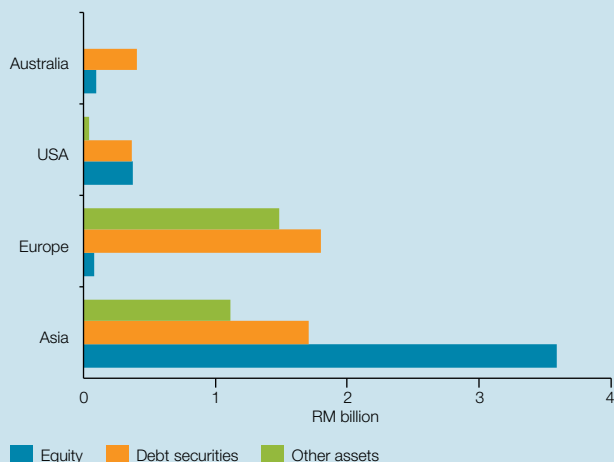
Main risks ceded out are from aviation, offshore oil-related, marine hull and engineering segments



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



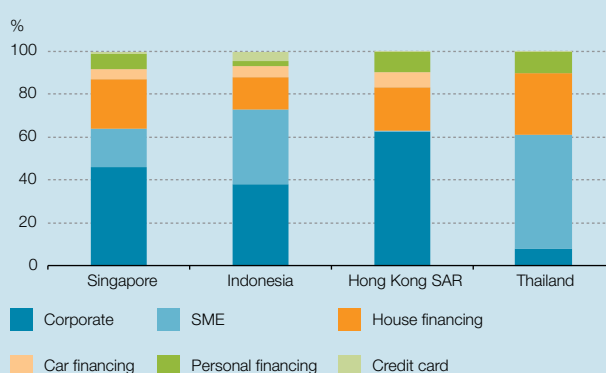
Source: Bank Negara Malaysia

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).

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.

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

Composition of overseas loans varies according to jurisdiction

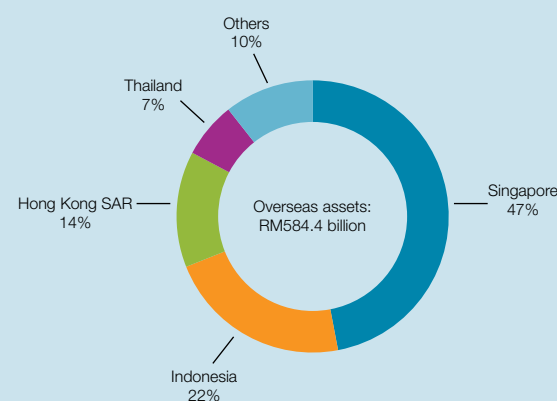


Note: Data as at end 3Q 2017

Source: Bank Negara Malaysia

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

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.

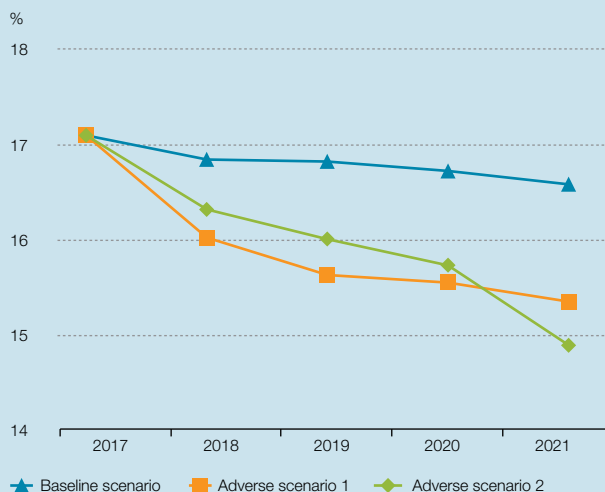
Multi-year Solvency Stress Test Affirmed Financial Institutions' Shock Absorbing Capacity

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

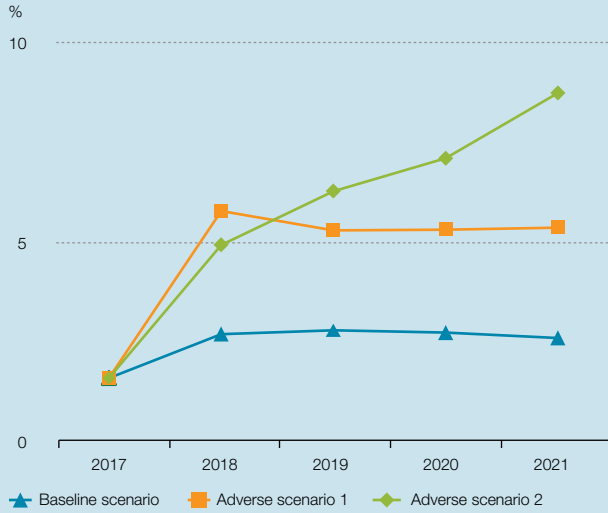
Banking system post-shock aggregate total capital ratio is estimated to be above 10%



Source: Bank Negara Malaysia

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 <ul style="list-style-type: none"> Annual decline in banks' income growth, differentiated across segments (interest income, fee-based and other income) Decline in loan growth (cumulative annual growth rate) Annual decline in insurers' premium income | <ul style="list-style-type: none"> Up to 34% -2% Up to 28% | <ul style="list-style-type: none"> Up to 32% -3.5% Up to 20% |
| Credit risk shocks <ul style="list-style-type: none"> Probability of default (PD) shocks <ul style="list-style-type: none"> Business loans Household loans Loss given default (LGD) shocks <ul style="list-style-type: none"> Business loans Household loans Default of top corporate borrowers with large exposures to the banking system | <ul style="list-style-type: none"> 5% to 11% 1% to 11% 42% to 57% 20% to 77% Corporations that have weak financial standings (below prudent thresholds) under simulated shocks | <ul style="list-style-type: none"> 5% to 14% 1% to 12% 43% to 61% 19% to 82% |
| Market risk shocks <ul style="list-style-type: none"> Annual increase in MGS yields Annual increase in corporate bond yields Annual decline in FBM KLCI Annual depreciation against major currencies | <ul style="list-style-type: none"> Up to 51 bps Up to 27 bps Up to 46% 13% to 30% | <ul style="list-style-type: none"> Up to 80 bps Up to 43 bps Up to 27% 7% to 15% |
| External funding risk shocks <ul style="list-style-type: none"> Reversal of claims by non-residents | <ul style="list-style-type: none"> Up to 30% of interbank borrowing and deposits | <ul style="list-style-type: none"> Up to 15% of interbank borrowing and deposits |
| General insurance risk shocks <ul style="list-style-type: none"> Increase in claims ratio Increase in premium liabilities (motor classes) | <ul style="list-style-type: none"> Up to 30% Up to 1.5 times additional provision for adverse deviation | <ul style="list-style-type: none"> Up to 16% 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 threshold¹. 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 article² which introduced the concept of financial margin by various income and debt service ratio³ (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.

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.

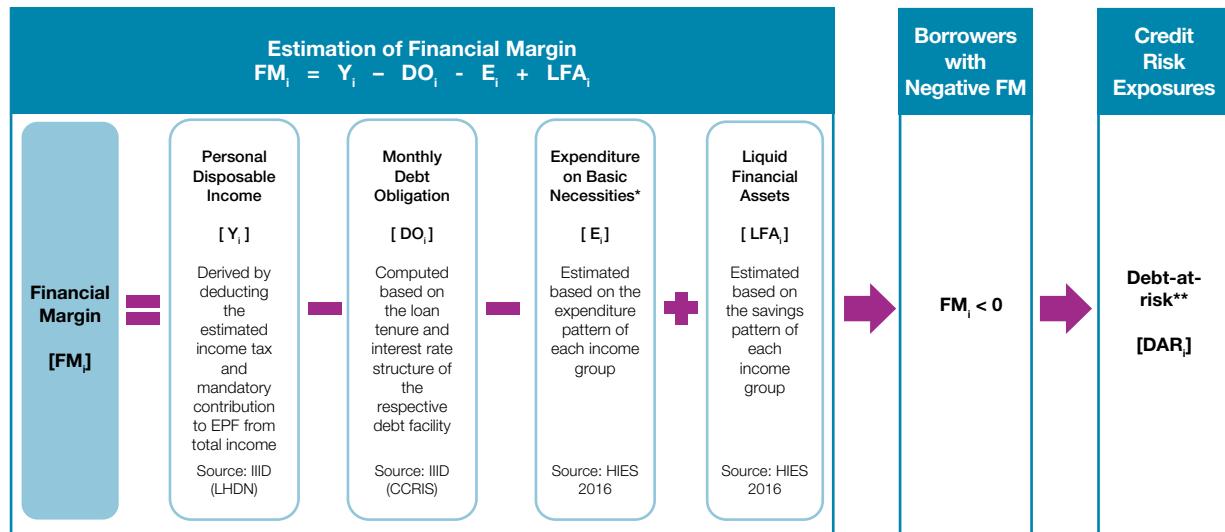
² 'Looking Beyond Headline Household Debt Statistics', Financial Stability and Payment Systems Report 2016, Page 41 - 46.

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 Margin⁴ Approach



ⁱ individual borrower⁶

* 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 values⁶.

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 Assets⁷ across Income Groups

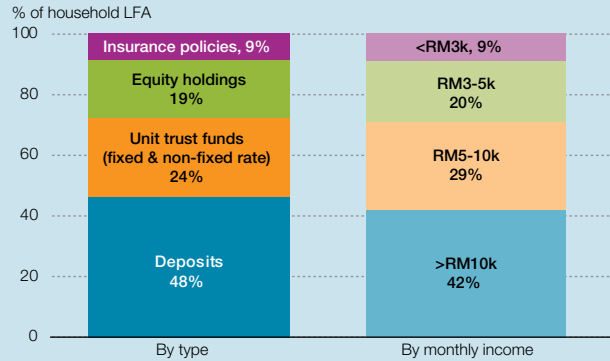
The household balance sheet at the aggregate level is healthy. Household financial assets⁸ and liquid financial assets (LFA) are 2.1 and 1.5 times of debt, respectively. However, analysis from a micro-level dataset provides more nuanced insights at different income levels, particularly for lower- and 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

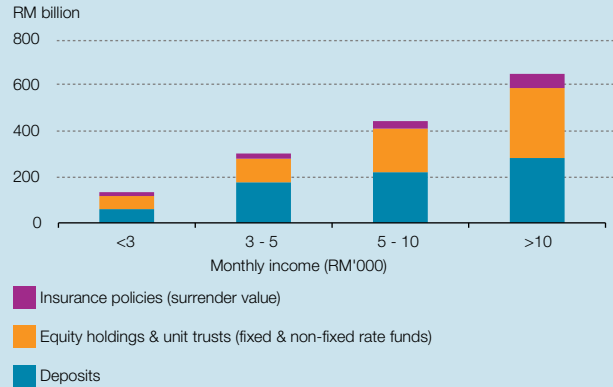
More than two-thirds of LFA consist of deposits and unit trust funds



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



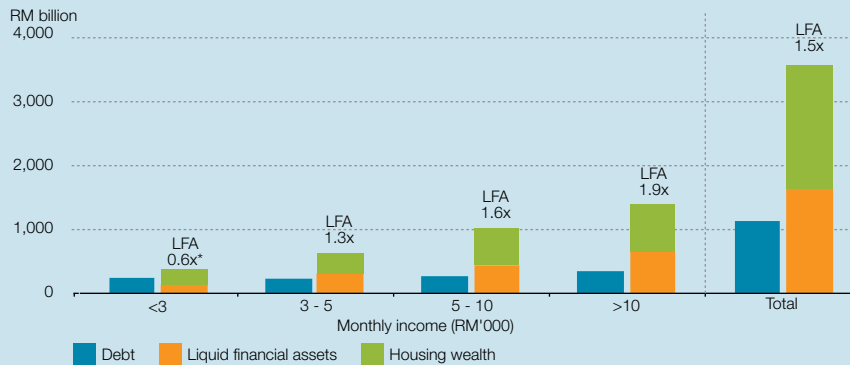
Note: Estimation of LFA by income group is based on income reported in 2016
 Source: Bank Negara Malaysia, Inland Revenue Board of Malaysia, Department of Statistics, Malaysia, Bloomberg, Securities Commission Malaysia and internal estimation

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 debt⁹, 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 wealth¹⁰, 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



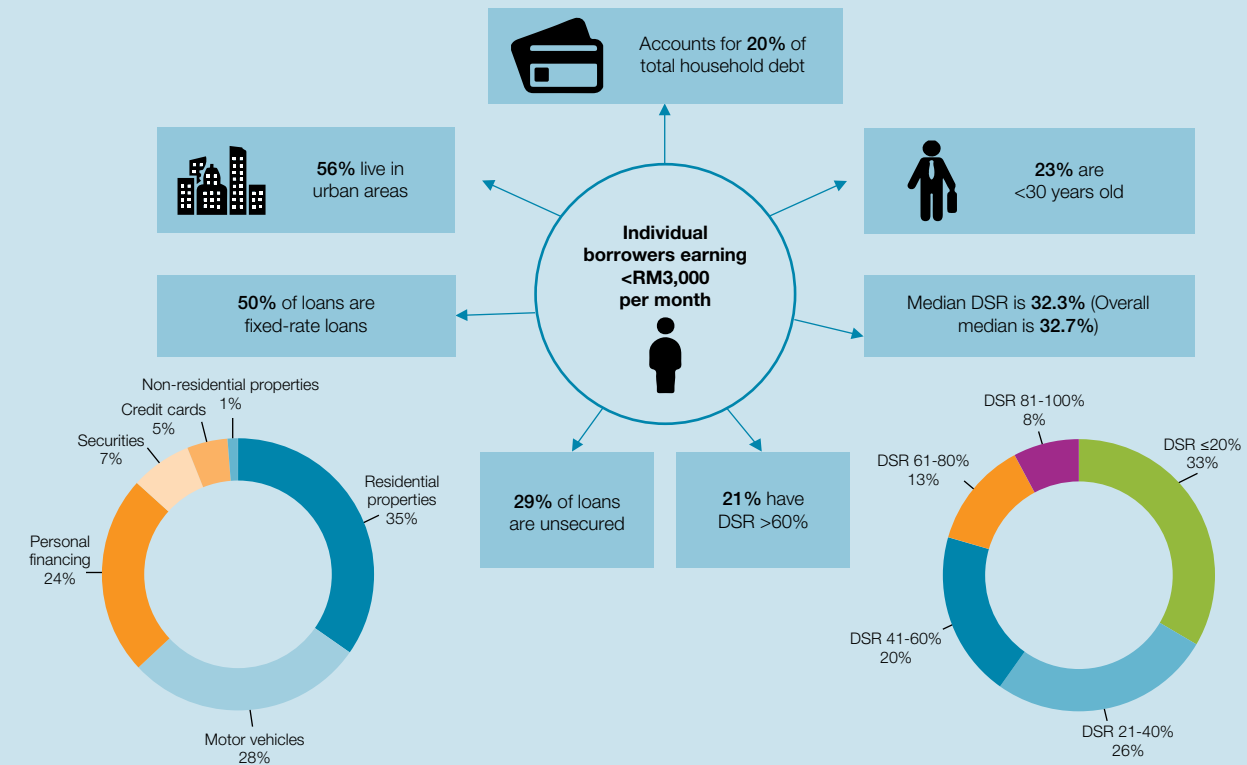
* Liquid financial assets cover 0.6 times of total debt

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 Statistics, 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 Scenario¹¹

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 Guideline¹⁴ 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 loans¹⁵ (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

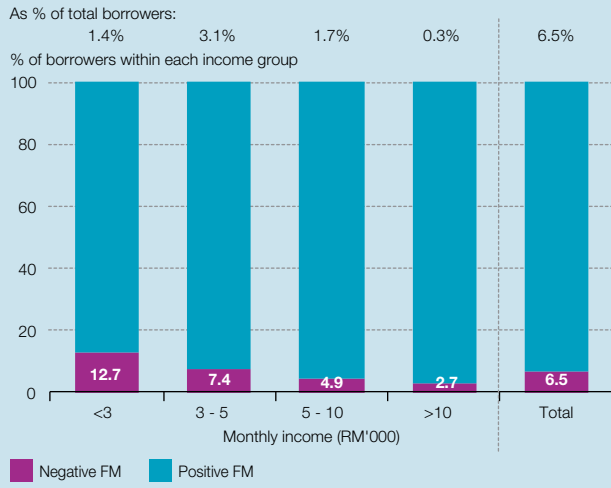


Chart 5: Borrowers with Negative FM by DSR and Income Group

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

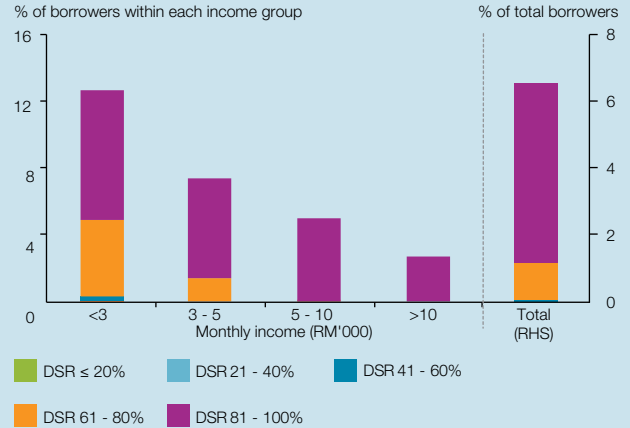


Chart 6: Debt-at-risk for Borrowers with Negative FM by DSR and Income Group

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

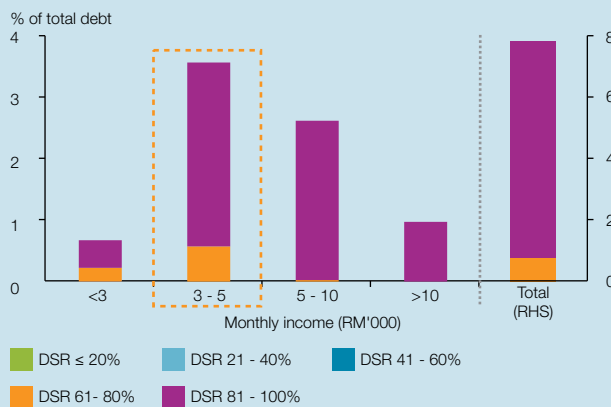
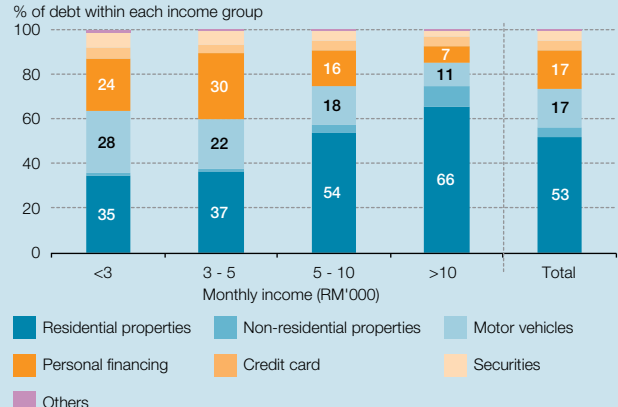


Chart 7: Household Debt by Purpose and Income Group

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



Household Resilience under Stressed Scenarios

In assessing borrowers' debt repayment capacity and financial resilience under stressed scenarios, three different shocks¹⁶ 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 |

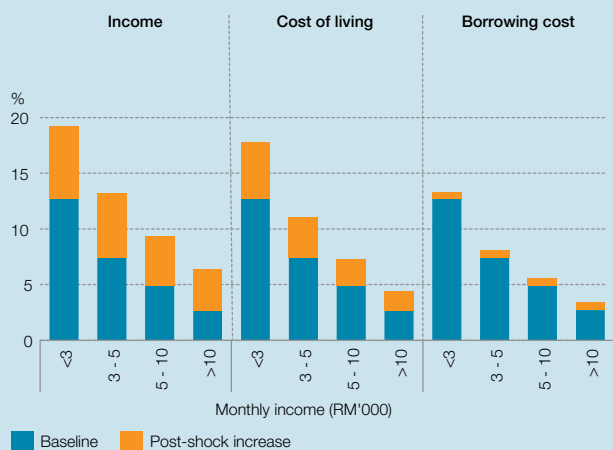
Source: Bank Negara Malaysia, Department of Statistics, Malaysia, Oxford Economics and internal estimation

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

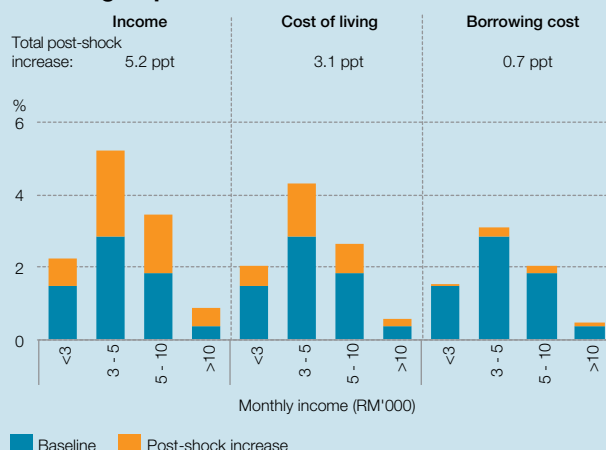
Borrowers are most affected by income shocks



Source: Bank Negara Malaysia (IID)

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



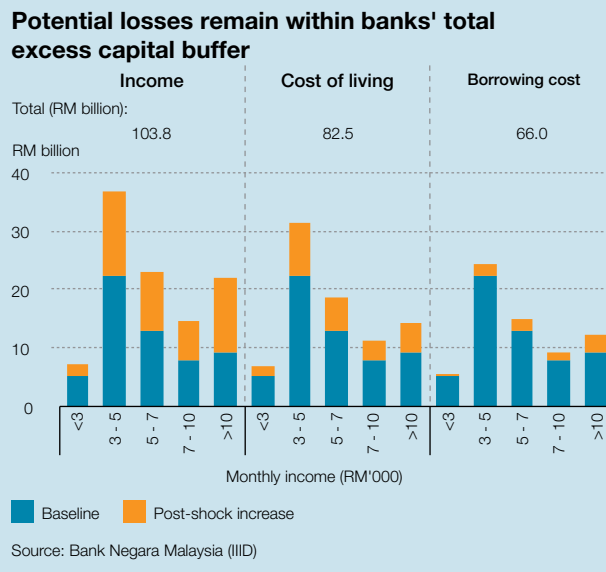
Source: Bank Negara Malaysia (IID)

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 billion¹⁷. 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



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

| Macroprudential measures | | | | | |
|---|---|---|--|--|--|
| <ul style="list-style-type: none"> Introduction of maximum 70% loan-to-value (LTV) on 3rd residential property loan and above | <ul style="list-style-type: none"> Stricter credit card requirements Introduction of maximum 60% LTV on residential property loan for non-individuals | | <ul style="list-style-type: none"> Introduction of maximum loan tenure: <ul style="list-style-type: none"> - Personal financing: 10 years - Residential property loans: 35 years - Car loans: 9 years | | |
| Microprudential measures | | | | | |
| | <ul style="list-style-type: none"> Higher risk weights for capital adequacy requirements | <ul style="list-style-type: none"> Implementation of Guidelines on Responsible Financing* | <ul style="list-style-type: none"> Implementation of Policy Document on Personal Financing | <ul style="list-style-type: none"> Implementation of Policy Document on Risk-Informed Pricing | <ul style="list-style-type: none"> Introduction of minimum collective impairment provisions and regulatory reserves of 1.2% |
| Fiscal and other measures | | | | | |
| <ul style="list-style-type: none"> Re-introduction** of Real Property Gains Tax (RPGT) for properties sold within the first 5 years (5%) | | <ul style="list-style-type: none"> Increase in RPGT: <ul style="list-style-type: none"> - 1st - 2nd year: 10%; - 3rd - 5th year: 5% | <ul style="list-style-type: none"> Increase in RPGT: <ul style="list-style-type: none"> - 1st - 2nd year: 15%; - 3rd - 5th year: 10% Prohibition of developers' interest bearing scheme and related financing | <ul style="list-style-type: none"> Increase in RPGT: <ul style="list-style-type: none"> - 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 | <ul style="list-style-type: none"> Increase supply of low-cost & affordable housing |
| 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |

* 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 worsened¹⁸ 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 Scheme²⁰ - 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 default²¹. 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 interest²². 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.

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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