BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Preface

This Financial Stability Review – First Half 2020 provides Bank Negara Malaysia's assessment on current and potential risks to financial stability and the resilience of the Malaysian financial system to sustain its financial intermediation role in the economy. It also reports on any actions that have been taken to manage risks to financial stability and contains box article(s) on topics of special interest.

This publication is intended to promote greater awareness on issues and developments affecting financial stability.

This document uses data available up to 30 June 2020, unless otherwise stated.

The Financial Stability Review - First Half 2020 is available in Portable Document Format (PDF) at www.bnm.gov.my

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Overview

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The COVID-19 pandemic has placed a substantial strain on the global economy and financial system. As the number of infections and fatalities rose, movement controls and physical distancing measures including travel restrictions were widely implemented, affecting consumption and investment activity. This led to a marked deterioration in labour market conditions. Global financial conditions tightened significantly as the pandemic escalated in March and April, with sharp declines in prices of financial assets, a surge in bond yields amid rising vulnerabilities in global corporate credit markets, and an abrupt reversal in portfolio flows, particularly from emerging markets. In Malaysia, the implementation of the Movement Control Order (MCO) and weak external demand similarly led to a contraction in economic activity and heightened levels of domestic market stress.

The Malaysian financial system entered the crisis from a strong position, which has enabled it to support substantial relief measures and sustain intermediation activity to tide households and businesses through a highly challenging period. In particular, the resilience of banks at the core of the financial system has acted to absorb rather than amplify the macroeconomic shocks arising from the pandemic. Policy actions by policymakers to address market stresses have also helped stabilise financial conditions, along with the gradual lifting of lockdowns and signs of a recovery in global economic activity. Collectively, this has mitigated risks to domestic financial stability. Financial market volatility is, however, expected to remain elevated with renewed concerns over a resurgence in COVID-19 infections.

The financial health of businesses deteriorated across most sectors amid significant business disruptions and weak demand. While businesses have started to recover with the gradual easing of the MCO, the recovery remains uneven. Relief measures introduced by the Government and banks are helping many businesses cope with temporary financial difficulties, although conditions will remain highly challenging in some industries. Despite the expected weakening in financial health, the aggregate indicator of the debt servicing capacity of non-financial corporates have remained above the prudent threshold, reflecting the reasonably healthy financial conditions prior to the pandemic. The pandemic has also taken a toll on household incomes and employment prospects, but most households have remained reasonably resilient. This is supported by comfortable financial buffers, particularly among the higher income group, and the generally prudent debt servicing levels of households.

More borrowers have been able to resume loan repayments in recent months with improvements in business and labour market conditions as economic activity gradually recovers. However, pockets of risk remain. Vulnerabilities will likely persist for some high-touch service industries and those that remain under strict constraints such as the tourism sector. Household borrowers who are more highly leveraged, with variable incomes, and/or employed in more adversely impacted sectors could also continue to face difficulties servicing their debt. With the automatic loan moratorium in place, aggregate banking system impairments and delinquencies have remained low, but are expected to increase in the period ahead.

Wide-ranging measures introduced by the Bank, in coordination with the industry, have been key in assisting individuals and businesses to weather this difficult period. The measures are focused on supporting the economy at large through the temporary shocks experienced, minimising long-lasting economic scarring, and supporting post-COVID-19 economic recovery, restructuring and reforms. The transition from a blanket moratorium

to more targeted repayment assistance measures would continue to extend temporary relief to viable borrowers that may still face challenges, while also improving visibility on loan performance for banks, which is a necessary condition to reduce risk aversion and encourage credit supply to support the economic recovery.

Conditions in the Malaysian property market were considerably weaker in 1H 2020. The combined effects of border closures, lower footfalls and more pervasive work-from-home arrangements are likely to amplify risks from pre-existing oversupply conditions in the non-residential property segment. While risks in the housing market have increased due to a deterioration in income and weaker demand conditions, the impact on overall financial stability remains largely mitigated by the sound quality of banks' existing housing loan exposures, measures by the Government to support housing demand, as well as the targeted assistance packages that will contain any large increase in housing loan defaults.

Despite a marked decline in earnings reported in 1H 2020, capital and liquidity buffers held by financial institutions remain high. In anticipation of a more challenging economic outlook, banks are taking additional measures to shore up their buffers, including capital retention measures. Along with the implementation of sound capital adequacy, liquidity and risk management standards over the years, this will preserve the ability of banks to continue supporting targeted assistance to borrowers and credit flows to the real sector as the economy recovers.

The pandemic presented new operational challenges which tested the agility of the crisis response arrangements of financial institutions and payment system operators. Critical operations of financial institutions largely continued to function within their recovery time objectives, while operational risk losses have remained low and stable during the period. Malaysia's payment systems also continued to operate smoothly without major disruptions, maintaining high system availability above 99.9%. Financial institutions and payment system operators have learnt crucial lessons from this experience and are taking steps to further enhance existing business continuity plans to improve their capacity to respond to future crises.

Under updated stress tests conducted by the Bank, banks are expected to remain resilient to potential economic and financial shocks that could still arise from the pandemic. While the Malaysian economy is expected to recover as business activities progressively normalise and external demand improves, the pace and strength of the recovery remain susceptible to multiple downside risks. This includes the prospect of subsequent waves of COVID-19 outbreaks leading to the re-imposition of containment measures. Persistent weakness in labour market conditions and a weaker-than-expected recovery in global growth are also factors that may affect the economy and financial stability. Under these conditions, a key priority will be preserving healthy financial buffers of banks to provide continued support to households and businesses, while reducing risk aversion that could amplify stresses in the economy.

Coping with COVID-19: Risk Developments in the First Half of 2020

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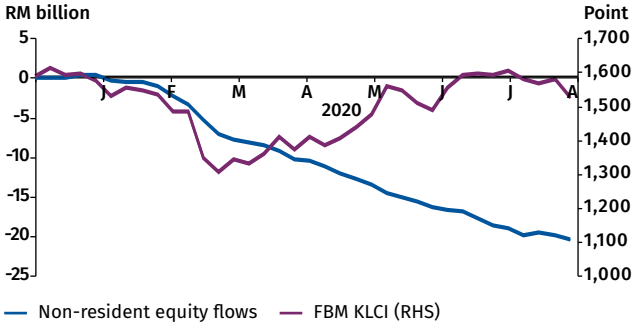
MARKET RISK

Domestic financial market conditions remained orderly despite significant market volatility

Developments surrounding the pandemic, combined with uncertainty on the impact of COVID-19 policy measures, ongoing geopolitical tensions and volatile oil prices, led to a tightening in global financial conditions in March and April 2020. On the domestic front, the implementation of the Movement Control Order (MCO)[1] to curb the spread of COVID-19 and weak external demand conditions have led to a contraction in economic activity which also resulted in higher levels of domestic market stress in 1H 2020. Policy interventions by the Bank served to maintain orderly conditions within the foreign exchange, bond, and money markets during this period, with conditions largely normalising by the end of 1H 2020. The Bank's open market operations, which included the purchase of government securities, helped to contain potential market dislocation and smoothen excessive volatility in the bond market, further aiding the market's recovery from the period of heightened volatility and significant capital outflows at the onset of the COVID-19 shock. The reduction in Statutory Reserve Requirement (SRR) also continued to ensure ample liquidity to support effective intermediation and orderly market conditions.

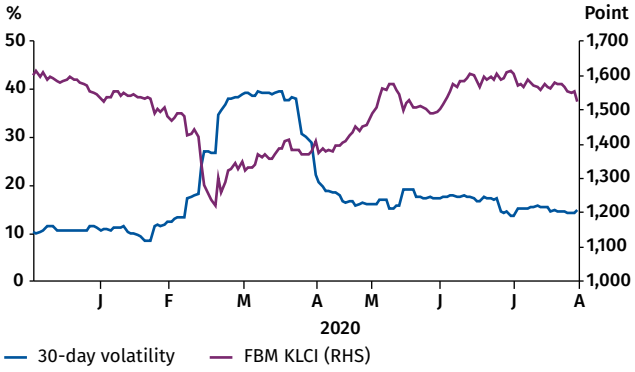
In the domestic equity market, non-resident (NR) outflows have persisted, amounting to RM20.3 billion (USD4.7 billion) up to end-August 2020 on heightened investor concerns over the economic impact of the pandemic (Chart 1.1). The impact on equity prices was however offset by a higher participation of domestic retail investors in the equity market, and a strong rally in healthcare and technology stocks. Of note, retail investors drove trading value and volume on the local bourse, overtaking domestic institutional investors, although more recent profit-taking activity since August has led to some price correction. While market volatility has subsided from the peak observed in March, it remained above levels observed prior to the crisis as markets remain sensitive to newsflows around COVID-19, the escalation of trade tensions, and domestic political developments (Charts 1.2 and 1.3).

Chart 1.1: Financial Market – Cumulative Non-resident Equity Flows and Performance of the Domestic Equity Market



Source: Bloomberg

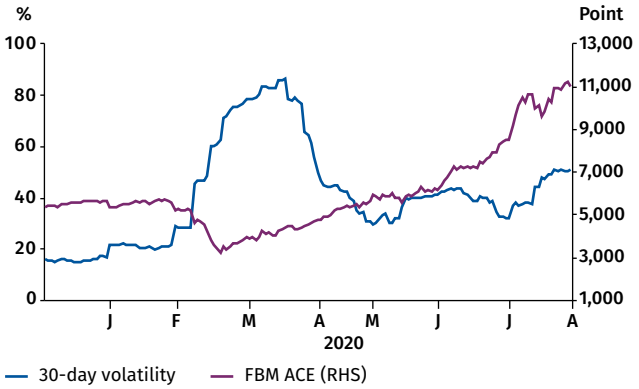
Chart 1.2: Financial Market – Performance and Volatility of FTSE Bursa Malaysia Kuala Lumpur Composite Index (FBM KLCI)



Source: Bloomberg

[1] The MCO was implemented on 18 March 2020 by the Government as a preventive measure in response to the COVID-19 pandemic.

Chart 1.3: Financial Market – Performance and Volatility of FTSE Bursa Malaysia ACE Index (FBM ACE)

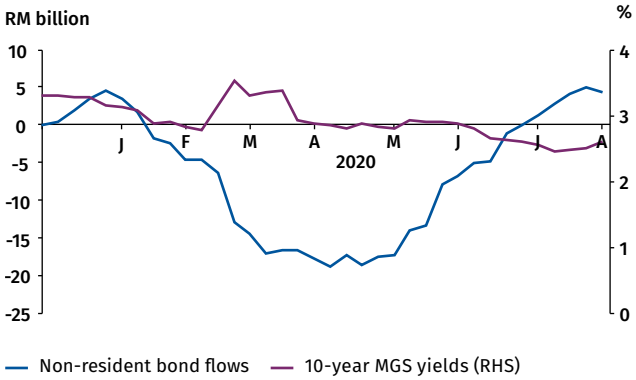


Source: Bloomberg

The domestic bond market experienced a temporary spike in bond yields with 10-year Malaysian Government Securities (MGS) and 10-year AAA corporate bond yields rising by 84 bps and 59 bps respectively, amid significant NR outflows (RM22.4 billion or USD5.2 billion) between February and April. Cumulative NR outflows which peaked in April 2020 have since reversed to record a RM4.3 billion (USD1.1 billion) net inflow until end-August 2020 (Chart 1.4) amid the gradual improvement in global investor sentiment and a continued stable base of NR investors, such as governments and central banks, in the domestic bond market. Sustained demand by domestic investors for Malaysian government bonds was supported by the Bank's measures to ease liquidity conditions, reflected in the bid-to-cover (BTC) ratio which averaged at 2.4 times in the first seven months of 2020. However, auctions for long-term bonds since August saw a slight tapering in demand amid excess supply concerns post-tabling of the COVID-19 stimulus bill. Among NR investors, demand for Malaysian government bonds began recovering since May, supported by improved market sentiment and the positive yield pickup over US Treasuries (Chart 1.5). Along with the more accommodative monetary policy, this has seen MGS yields gradually retreat from the sharp increase observed in March. The corporate bond market continued to function smoothly with credit spreads for 10-year AAA papers normalising to around 54 bps after reaching a peak of 105 bps in April. Net corporate bond issuances have also recovered as firms sought to shore up liquidity while taking advantage of lower borrowing costs, although issuances remain below levels in 2019 (January-August 2020: RM17.8 billion, January-August 2019: RM28.8 billion). As in previous episodes of market stress, the sustained demand from domestic institutional investors, such as banks, non-bank financial institutions (NBFIs) and insurers and takaful operators (ITOs), continues to play an important role in preserving orderly conditions and providing continued access to credit markets throughout 1H 2020 (for more information, refer to the Information Box on 'Impact of COVID-19 on Systemic Non-bank Financial Institutions'). Malaysia's deep and liquid bond market with the support from this diverse investor base will also lend continued support to orderly market conditions.

In the near term, financial market volatility is expected to remain elevated. A resumption in the rise of COVID-19 infections in several countries will continue to weigh on financial markets and heighten market volatility. Investor sentiment could also turn more cautious on weaker-than-expected corporate earnings and an escalation of trade tensions.

Chart 1.4: Financial Market – Cumulative Non-resident Bond Flows and Performance of the Domestic Bond Market



Source: Bank Negara Malaysia and Bloomberg

Chart 1.5: Financial Market – 10-year MGS-UST Yield Differential

Source: Bloomberg

Impact of COVID-19 on Systemic Non-bank Financial Institutions

Amid the COVID-19 outbreak, several systemic non-bank financial institutions (NBFIs) experienced increased demands for liquidity arising from the implementation of Government support measures.[2] Despite their significant investment holdings in the capital market, rebalancing activities by some NBFIs in response to liquidity needs have not had a material impact on asset prices. Increased liquidity needs of NBFIs were largely met from available cash and other liquid assets, with rebalancing activities generally conducted in an orderly manner. Although NBFIs' deposit placements in banks fell briefly in the first quarter, this had limited impact on banks' liquidity as the share of banking system deposits held by these systemic NBFIs remained low (June 2020: 5.3%).

NBFIs remain key participants in the domestic financial markets with sizeable investment holdings of 30.5% and 42.4% of equity market capitalisation and outstanding debt issuances, respectively. During periods of heavy sell-offs, NBFIs have continued to provide countercyclical support to markets, as observed when the FTSE Bursa Malaysia KLCI (FBM KLCI) fell by 15% in the first quarter of 2020. NBFIs' investments in equities correspondingly increased amid attractive market valuations. Systemic NBFIs similarly provided support to the government bond market amid bouts of sizeable non-resident outflows. NBFIs' holdings of shares in banks increased during this period from 37% to 40% of the market capitalisation of listed banks. Financial stability risks associated with such holdings remain low given the continued financial strength of NBFIs, the strategic and longer-term nature of these investments and the strong governance requirements imposed on licensed financial institutions.

Continued uncertainty surrounding the pandemic is likely to weigh on NBFIs' investment performance for the year. Some NBFIs may experience higher withdrawals or redemptions by investors who are more sensitive to investment returns if returns underwhelm. Redemption risks by such investors, however, are expected to be mitigated by more cautious risk appetite and low returns from alternative investments in the current environment. Systemic NBFIs generally also continue to hold sufficient liquid financial buffers in the form of cash deposits and government debt securities to meet potential stressed withdrawals over a period of more than 90 days.

[2] The relief measures include lowering the contribution rate and allowing the withdrawal of contributions from retirement funds, introducing wage subsidy programmes to encourage continued employment, and education loan deferments.

CREDIT RISK

Weaker operating conditions weighed on the financial health of most firms

The financial performance of Malaysian non-financial corporates (NFCs) deteriorated in the first half of 2020, amid significant business disruptions and weak demand across most sectors due to widespread lockdowns in Malaysia and other countries to contain the spread of the virus. While businesses have started to recover with the gradual easing of the MCO since May, the recovery has been uneven. The tourism-related and services industries[3] were notably among the most impacted by the pandemic, as revenues fell sharply following lower inbound passenger loads and reduced spending on non-essential services. Restrictions on air travel also weighed heavily on global oil demand, disrupting the recovery of firms in the oil and gas sector observed in late 2019. More recently, the wholesale and retail sector has seen a gradual recovery following the easing of mobility restrictions post-MCO. Improvements were also observed in the manufacturing sector, notably within the electrical and electronics (E&E) and medical product segments, which have benefitted from a backlog of orders due to the MCO. In the real estate sector, activity has picked up slightly in recent months although conditions remain challenging (refer to the section on risks in the property market below for further details).

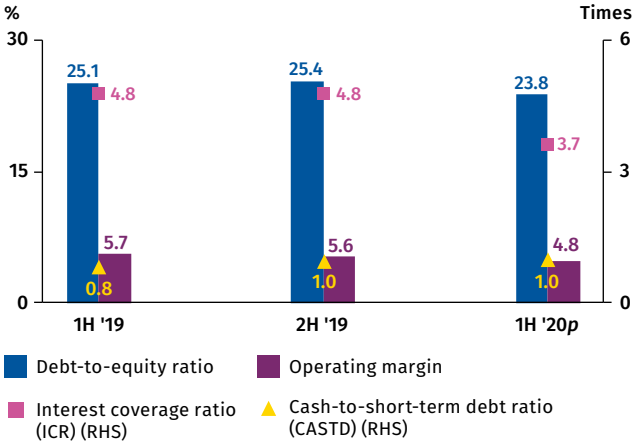
While the overall debt-servicing capacity[4] of NFCs has weakened due to the significant impact of COVID-19, it remained above the prudent threshold[5] reflecting reasonably healthy initial financial conditions before the pandemic (Chart 1.6 and Diagram 1.1). The number of firms with an ICR of less than two times rose to 32.1% of listed firms as at June 2020 (December 2019: 28.1%) despite liquidity positions[6] improving slightly from the first quarter of 2020 as firms conserved cash reserves.

The share of firms at risk is expected to rise further by the end of 2020 as more businesses may struggle to adapt to new operating conditions.

The impact of the pandemic has been more pronounced on small and medium enterprises (SMEs).[7] Surveys indicate that among smaller firms, many have limited financial buffers with cash reserves of only two months or less of expenses.[8] The lower level of digitalisation among SMEs[9] has also constrained their ability to pivot to e-commerce platforms to sustain business activity, particularly during the early phase of the MCO. Relief measures introduced by the Government and banks are helping many businesses tide over temporary financial difficulties, although conditions will remain highly challenging in industries that continue to be affected by international border restrictions (refer to the Box Article on 'Measures to Mitigate the Impact of the COVID-19 Pandemic and Preserve Financial Stability' for details of measures introduced).

The significant relief measures introduced have kept business loan impairment ratios low and stable at 2.5% for overall NFCs (Chart 1.7). During the first half of the year, only one domestic corporate bond

Chart 1.6: Business Sector – Key Financial Performance Indicators



p Preliminary

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

Source: S&P Capital IQ and Bank Negara Malaysia estimates

[3] Including airlines, land transport, hotels and restaurants, entertainment and theme parks, medical tourism, travel agents, and retail services.
[4] As measured by the median interest coverage ratio (ICR).
[5] Prudent threshold for ICR is two times.
[6] As measured by the median cash-to-short-term debt ratio (CASTD).

[7] Including micro enterprises and sole proprietors.
[8] Based on surveys done by SME Association of Malaysia and Small and Medium Enterprises Association (SAMENTA) in end-March and early-April 2020, respectively.
[9] Based on 2018 SME Survey done by the Bank, only 14% of SMEs reported having an online presence such as dedicated web stores and social media accounts.

Diagram 1.1: Key Indicators for Selected Vulnerable Sectors

	Tourism-related	Wholesale and retail	Construction	Real estate	Oil and gas
ICR (times)	3.7	4.9	2.3	2.6	3.1
CASTD (times)	1.0	1.2	0.5	0.5	0.8
CR (times)	2.0	2.4	1.8	1.6	1.3
DE (%)	23.8	27.4	36.8	39.1	36.1
% of bank loans to businesses	7.0	18.1	14.5	17.7	1.1
Impairment ratio (%)	2.2	1.6	2.6	2.0	3.6

Note:

1. The tourism-related sector includes companies in the following services sectors: airlines, land transport, hotels and restaurants, entertainment and theme parks, medical tourism, and travel agents
2. The following financial ratios are based on Bursa-listed companies only: ICR: Interest coverage ratio (prudent threshold: 2 times), CASTD: Cash-to-short-term debt ratio (prudent threshold: 1 time), CR: Current ratio, DE: Debt-to-equity ratio

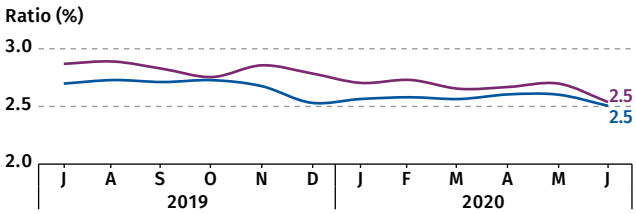
Source: Bank Negara Malaysia, S&P Capital IQ and Bank Negara Malaysia estimates

downgrade was reported (2019: 7), accounting for 0.03% of total corporate bonds and sukuk held by financial institutions. However, banks have reported a higher share of business loans with increased credit risks[10] (13.9%; 2019: 11.5%), indicating signs of businesses facing greater financial stress. The targeted debt assistance and relief measures extended by banks will help viable businesses maintain debt serviceability and avoid widespread defaults. For the period between April and July 2020, banks approved 6.3 times as many applications from businesses to reschedule and restructure (R&R) their loans compared to total outstanding R&R business exposures as at end-2019. The outlook for business credit risks will however continue to be highly dependent on the pace and strength of economic recovery.

Total outstanding debt of the NFC sector grew by 3.8% annually to RM1.6 trillion or 108.1% of GDP as at June 2020 (Chart 1.8), mainly attributed to lower repayments due to the moratorium and an increase in working capital loans. Aggregate new loans disbursed to NFCs however declined (-3.4%)

[10] Classified as Stage 2 loans under the Malaysian Financial Reporting Standard 9.

Chart 1.7: Business Sector – Gross Impaired Loans



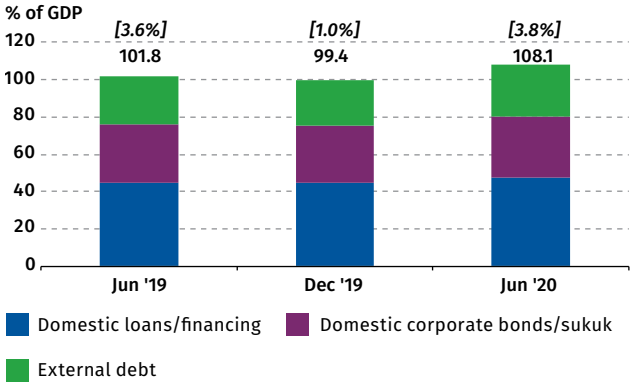
— Overall business: Gross impaired loans

— SME: Gross impaired loans

Source: Bank Negara Malaysia

as demand for financing moderated sharply and banks re-assessed business sector risks. In the capital market, refinancing risks remain low with corporates observed to continue to be able to raise funding during this period. While larger issuances of government bonds going forward could see some crowding out of corporate funding in the debt market, the majority of corporate bonds maturing this year continue to be highly-rated, further mitigating refinancing risks. Corporate sector external debt increased by 4.9%, mainly driven by additional borrowings by firms in the oil and gas-related sector and valuation effects following the weaker ringgit during the first half of 2020 against selected major and regional currencies.

Chart 1.8: Business Sector – Non-financial Corporate Debt-to-GDP Ratio and Aggregate Debt Annual Growth Rate



[...%] refers to aggregate non-financial corporate debt annual growth rate

Source: Bank Negara Malaysia

Risks to financial stability from external borrowings remain manageable as borrowings are mostly medium- to long-term in nature and hedged against exposures to currency movements.

Business conditions are expected to improve in the second half of the year, in line with the gradual improvement in economic activity. The extension of targeted financial relief measures will continue to help support businesses alongside corporate and SME guarantee schemes as the recovery takes a stronger hold. More importantly, greater visibility on loan performance from the transition to more targeted repayment assistance remains important to reduce risk aversion and improve credit supply during the recovery phase.

However, vulnerabilities remain elevated for sectors that may see a slower recovery, particularly tourism-related sectors and high-touch service industries where border restrictions and precautionary consumer behaviour continue to weigh on business activities. Risks of COVID-19 infections rising again could also affect global demand. Sectors that may continue to be affected[11] account for about 16% of total banking system loans. The banking system is expected to remain resilient to a significant increase in overall business impairments with losses to banks substantially mitigated by collateralised obligations and diversified revenue sources among larger borrowers (refer to the Chapter on 'Financial Institution Soundness and Resilience' for further details). Intensified credit risk monitoring by banks with a focus on borrowers in more vulnerable sectors is also expected to contain impairments by enabling businesses to pre-emptively reschedule or restructure their debt. At the banking system level, around a quarter of business loans are subjected to intensified monitoring.

Housing market activity fell in 1H 2020, while non-residential properties experienced above-average vacancy rates and depressed rental yields

In the residential property segment, house prices as measured by the Malaysian House Price Index (MHPI) continued to register positive, albeit slower growth of 1.1% in the first half-year of 2020[12] (2019: 2.2%). Market activity weakened considerably, with both volume and value of transactions falling sharply during the period (Chart 1.9). Fewer housing projects launched during the second quarter further dampened market activity, with the number of new units amounting to only about one-fifth (3,911 units) of the quarterly average in 2019. The number of unsold houses has remained elevated at close to 170,000 units, with most still under construction (67% of unsold units) or priced above RM300,000 (73%).

In the non-residential property segment, short-term accommodations such as hotels and budget hotels were hit hardest by the pandemic as mandatory travel restrictions and border closures, coupled with heightened concerns over health and finances, severely impacted travel and vacation activities. The average hotel occupancy rate plunged significantly to a low of 12% (5-year historical average: 61%), with many hotel operators either scaling down or closing operations. Following relaxations on interstate travel under the recovery MCO (RMCO),[13] close to 90% of premises that were temporarily closed in April 2020 are reported to have resumed operations as at end-August,[14] although the outlook remains challenging given that cross-border travel restrictions remain largely in place.

[11] Specifically, transport and storage, wholesale and retail trade, hotels and restaurants, and manufacturing sectors.

[12] 1.9% in 1Q 2020 and 0.4% in 2Q 2020 (preliminary estimates).

[13] CMCO and RMCO were implemented on 4 May 2020 and 10 June 2020, respectively, after Malaysia reported successive lower daily new COVID-19 cases.

[14] Based on surveys conducted by Malaysian Association of Hotels in April and August 2020.

Shopping complexes were also adversely affected by the decline in footfall during the MCO and lagged recovery during the subsequent conditional MCO (CMCO) and RMCO. Amid pre-existing oversupply conditions and changes to consumption behaviour since the pandemic, rental rates in the retail commercial property market are likely to remain depressed in the period ahead. Industry insights indicate that the recovery in footfalls in malls will be gradual, and could take between 6 to 12 months given continued cautious behaviour and adoption of the new standard operating procedures (SOPs).

Risks in the property market have increased

Meanwhile in the office space segment, the immediate impact from an increase in flexible working arrangements has been relatively muted so far, as vacancy rates for prime office spaces in the Klang Valley recorded only a slight increase. Anecdotal evidence suggests that businesses may review their space requirements as leases come up for renewal to take into account the higher number of staff expected to continue working from home as well as physical distancing conditions at the workplace. This could further weigh on office occupancy and rental rates (Charts 1.10 and 1.11).

The pandemic may increase risks of a broader decline in house prices due to a deterioration in income and weaker demand conditions. This in turn would increase risks to financial stability given that loans for the purchase of residential properties account for the bulk of banks' total property-related exposures (Chart 1.12). That said, several factors are expected to mitigate this risk. First, over 80% of loans are extended for homes that are owner-occupied which substantially reduces the likelihood of borrowers defaulting on their loans. Second, the bulk (85%) of borrowings for investment purchases are associated with higher-income borrowers earning more than RM5,000 per month. Such borrowers are generally more resilient to income shocks and are unlikely to dispose of properties at a loss if they can continue to service their debt. Third, speculative activity in the housing market has remained subdued for some years now, with prices in some segments already having moderated significantly from exuberant valuations in the past. Further, recent OPR cuts and the reintroduction of the Home Ownership Campaign[15] (HOC) should continue to provide some support to housing demand, particularly in the primary market, as already evidenced by the strong recovery in the growth of applications of loans for the purchase of residential property in June (20.0% annual growth rate; April: -72.1%), mainly in the affordable segment. The automatic loan moratorium and targeted repayment assistance also provide vulnerable borrowers with some relief and will limit property foreclosures that could put pressure on house prices. In other property segments, the exposure of banks remains low and continued to be largely performing (Charts 1.13 and 1.14).

[15] HOC was reintroduced by the Government in June 2020 until May 2021, to provide financial incentives to homebuyers with stamp duty exemptions and house price discounts. Additionally, the 70% margin of financing limit applicable for the third housing loan onwards for property valued at RM600,000 and above, was uplifted for the same period, subject to internal risk management practices of financial institutions.

Chart 1.9: Property Market – Housing Transactions

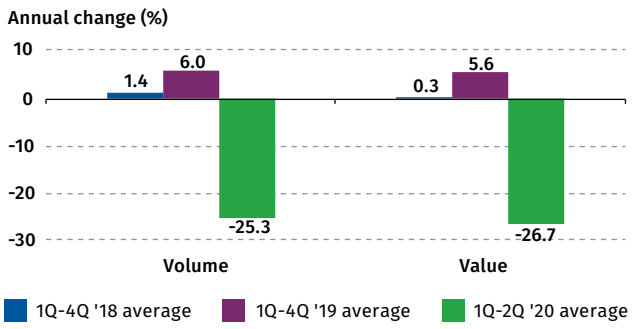


Chart 1.10: Property Market – Occupancy Rate for Hotels and Vacancy Rates for Office and Retail Space

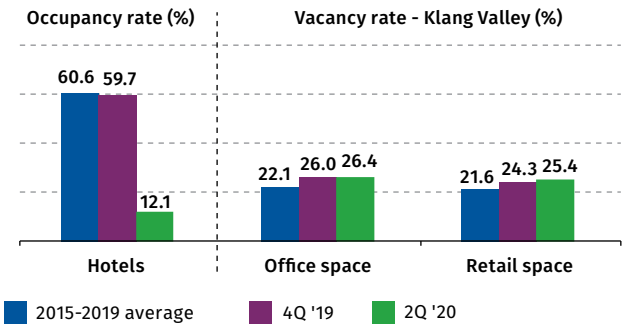


Chart 1.11: Property Market – Rentals for Prime Office and Retail Space in Kuala Lumpur

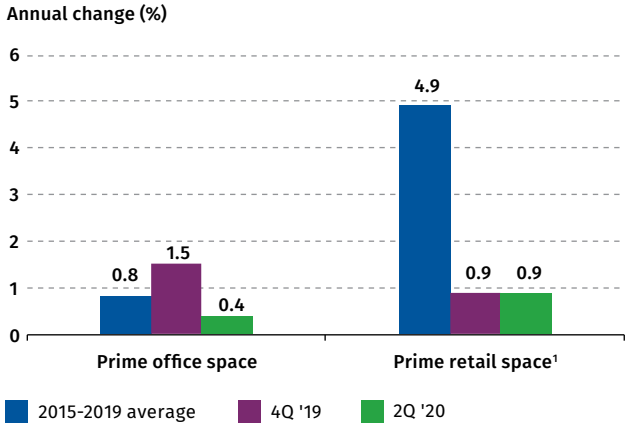


Chart 1.12: Property Market – Financial Institutions' Exposures to the Property Market

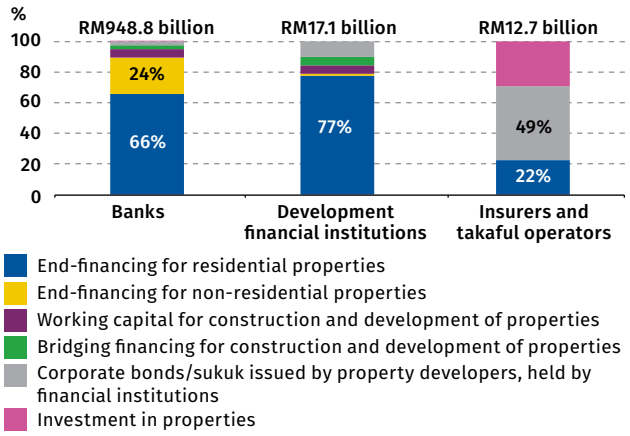


Chart 1.13: Property Market – Loan Impairment Ratios for End-Financing by Segment

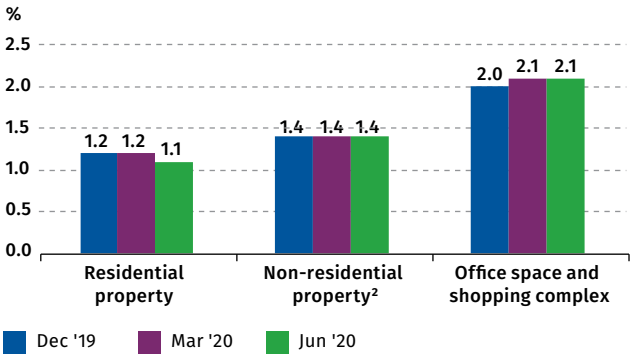
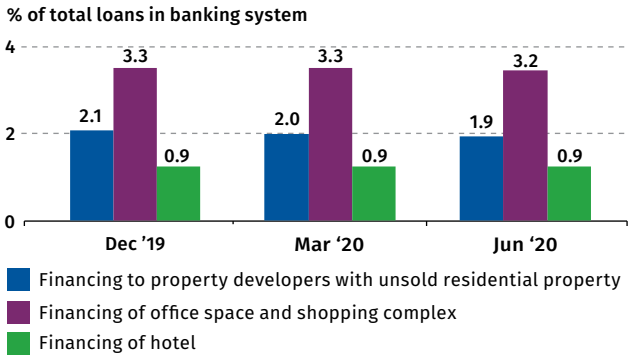


Chart 1.14: Property Market – Banking System's Exposure to Vulnerable Segments in the Property Market



[1] Average rents of the most prominent shops in major shopping complexes
[2] Includes shops, hotels, industrial buildings, factories and land, but excludes office space and shopping complexes

Source: Bank Negara Malaysia, JLL Malaysia, Jones Lang Wootton, Malaysian Association of Hotels, Malaysia Tourism Promotion Board, National Property Information Centre (NAPIC) and Savills Malaysia

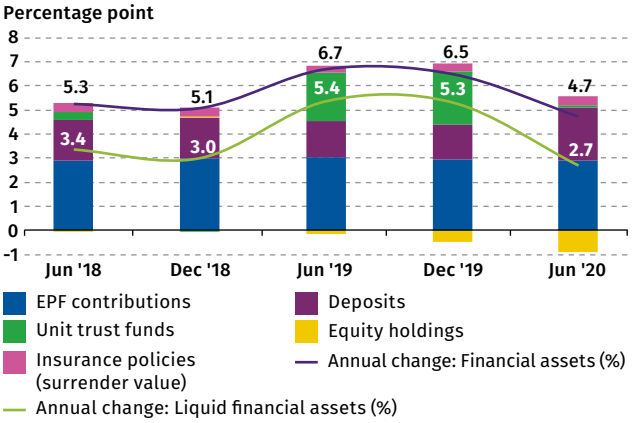
Households were partially cushioned by the relief measures from the adverse impact of the pandemic

At the aggregate level, most households are expected to remain reasonably resilient despite the impact of the pandemic on household income and employment prospects. Households continue to maintain comfortable levels of financial assets and liquid financial assets (LFA) at 2.2 times and 1.4 times of debt, respectively as relief measures introduced by Government and the Bank released extra cash to households.[16] Household deposits correspondingly recorded stronger annual growth of 7.0% as at end-June 2020 (2019: 4.6%) (Chart 1.15). Meanwhile, the growth in household debt[17] moderated to 4.0% (2019: 5.5%) amid movement restrictions and lower discretionary purchases as households turned more cautious (Chart 1.16). This was mainly reflected in the weaker loan growth for the purchase of residential properties and motor vehicles in 1H 2020 (7.2% and -0.9%, respectively; 2019: 8.5% and -0.4%, respectively).

Despite the slower growth in debt, the household debt-to-GDP ratio rose above its previous peak of 86.9% in 2015 to 87.5% as of June 2020 due mainly to the sharp contraction in nominal GDP in the second quarter (Chart 1.17). This ratio is expected to decline as economic activity improves and households gradually resume loan repayments. Although household debt levels remain elevated, households are generally still borrowing within their means as reflected by the prudent overall median debt service ratio (DSR) for outstanding and newly-approved loans of 35% and 43%, respectively (2019: 37% and 43%, respectively).

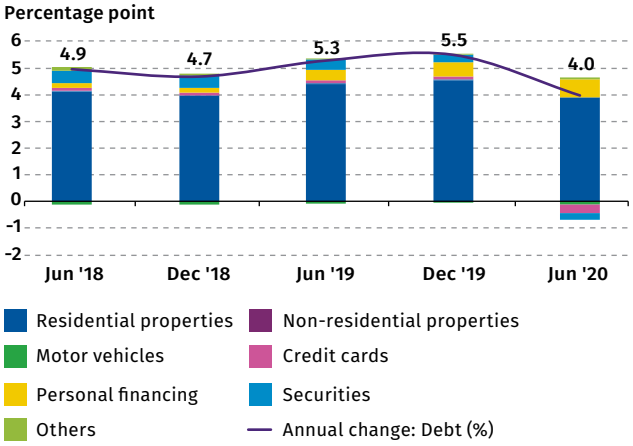
Some households, however, are facing increased financial stress. Household leverage[18] increased the most among borrowers earning less than RM5,000 per month in 1H 2020, amid income prospects

Chart 1.15: Household Sector – Annual Growth of Financial Assets



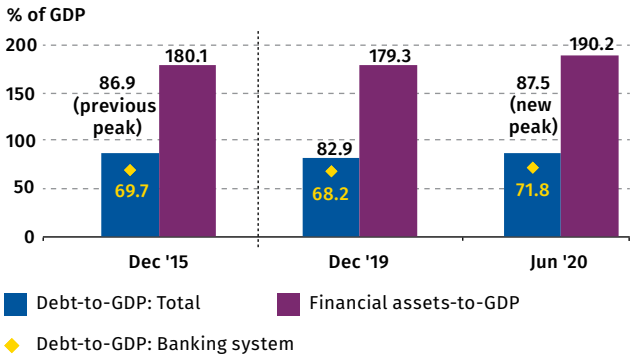
Source: Bank Negara Malaysia, Bursa Malaysia, Employees Provident Fund, Securities Commission Malaysia

Chart 1.16: Household Sector – Annual Growth of Debt



Source: Bank Negara Malaysia

Chart 1.17: Household Sector – Key Ratios



Source: Bank Negara Malaysia, Bursa Malaysia, Department of Statistics, Malaysia, Employees Provident Fund and Securities Commission Malaysia

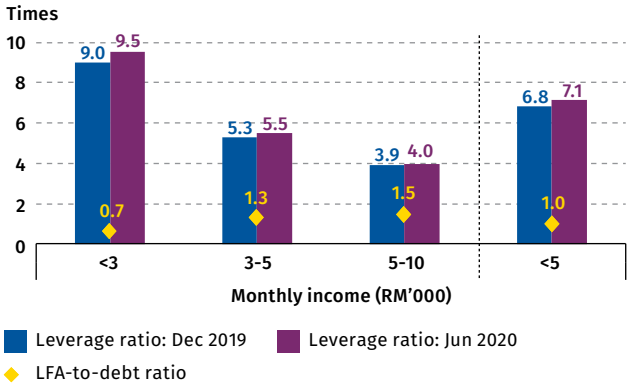
[16] As to date, total cash disbursements under *Bantuan Prihatin Nasional* (BPN) was RM11.2 billion involving 10.6 million recipients. Total cumulative withdrawals under i-Lestari from April to September amounted to RM9.33 billion, with 4.64 million applications approved.

[17] Extended by both banks and non-bank financial institutions.

[18] Measured as a ratio of outstanding debt to annual income.

that are more uncertain and liquidity buffers for borrowers earning less than RM3,000 that are already stretched (Chart 1.18). The higher leverage has been mainly attributable to an increase in borrowings for the purchase of homes earlier in the year[19] and in June following the reintroduction of the HOC. Despite expectations for labour market conditions to improve going forward, borrowers with variable income and/or employed in more adversely impacted sectors will also likely face continued challenges. For these borrowers, the targeted assistance[20] extended up to the first quarter of 2021 will provide further temporary financial relief, while Government measures such as the wage subsidy, and reskilling and upskilling programmes will serve to improve future employment and income prospects. This in turn will support debt serviceability.

Chart 1.18: Household Sector – Leverage and LFA-to-Debt Ratio



Source: Bank Negara Malaysia, Bursa Malaysia and Securities Commission Malaysia

A notable development in the first half of 2020 has been the significant increase in retail participation in the equity market, which saw retail investors purchasing a total of RM113.1 billion worth of listed shares. Our surveillance indicates that the surge in retail participation has not been funded by borrowings. Loans disbursed and outstanding for the purchase of shares, including margin financing, remained low and broadly stable during this period (Chart 1.19). Such loans continue to account for a small share of overall household debt (0.5%) and bank lending to households (0.6%). There have also been no discernible changes in the profile of household borrowers with share margin facilities, as they remain mostly within the higher-income segments with larger financial buffers (Chart 1.20).

Anecdotal insights suggest that some households are using excess cash reserves from relief measures and savings to invest in equities. This could increase risks to households through the impact on debt-servicing capacity and wealth effects if the value of equities fall substantially when households have to resume their loan repayments. As noted above, such risks are assessed to be low given that leveraged retail investors typically have larger financial buffers. Total equity holdings by households as a share of LFA has also remained largely unchanged (Chart 1.21). Based on a sensitivity analysis, most households would be able to withstand an extreme equity market shock equivalent to that experienced during the Asian Financial Crisis (Chart 1.22).

[19] Driven by Cagamas' *Skim Rumah Pertamaku*.
[20] Covers (i) an extended 3-month loan moratorium from October 2020 for borrowers who have lost their jobs; and (ii) a reduction in the monthly instalment for debt obligations proportionate to income declines for a period of six months until March 2021. This assistance programme was announced in July 2020.

Chart 1.19: Household Sector – Loans for Purchase of Quoted Shares, Personal Financing and Purchase of Shares in Equity Market

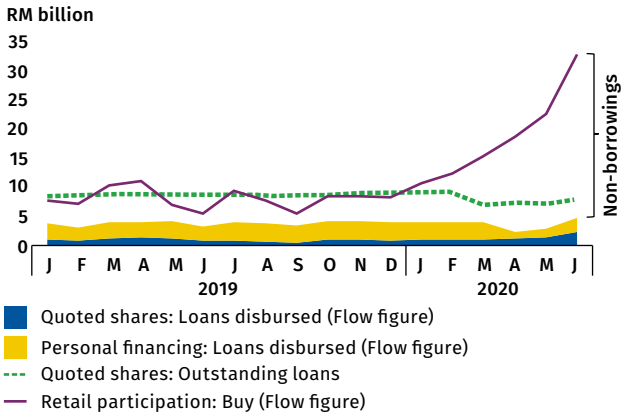
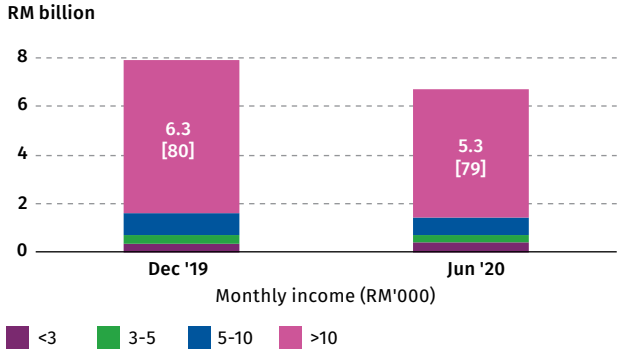


Chart 1.20: Household Sector - Outstanding Loans for Purchase of Quoted Shares by Income Group



[ ] indicates % share of the components against total loans for quoted shares in the banking system

Chart 1.21: Household Sector – Liquid Financial Assets (LFA) by Type

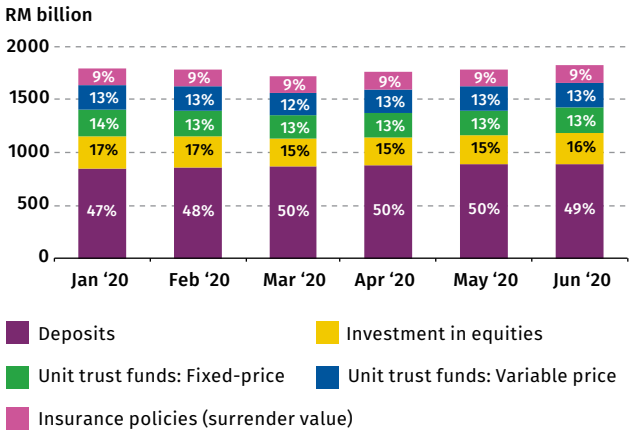
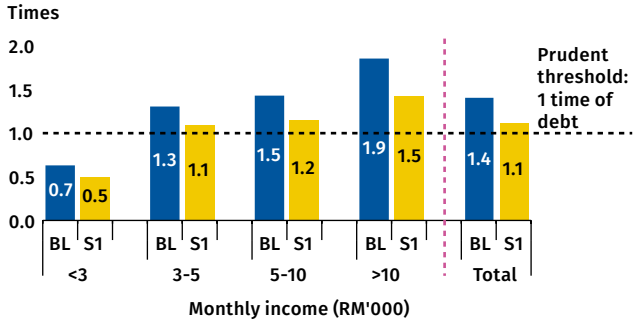


Chart 1.22: Pre- and Post-shock Scenarios – LFA Cover by Income Group



BL: Baseline
Shock scenario, S1: 77% decline in value of equity and variable price unit trust fund holdings, based on the 77% drop in FTSE Bursa Malaysia KLCI (FBM KLCI) in 1997

Source: Bank Negara Malaysia, Bursa Malaysia and Securities Commission Malaysia

The automatic loan moratorium provided many households with immediate temporary financial relief, particularly those who had lost their jobs and were experiencing income declines. At its peak, close to 90% of household borrowers with about 87% of outstanding household loans in the banking system were under the moratorium as most borrowers elected to defer their loan repayments to secure greater flexibility in managing their cash flows during a highly uncertain period. Many of these borrowers would have been able to continue servicing their debt if they had chosen to. Based on the enhanced financial margin framework,[21] the Bank estimates that household borrowers who may experience difficulties (i.e. those with negative financial margins) in servicing their debt as a result of income and unemployment shocks are unlikely to account for more than 15% of total borrowers. Among these borrowers, about 1% of total borrowers with 3% of outstanding household debt are expected to default after accounting for financial buffers held and targeted repayment assistance extended to borrowers in need. About 40% of the potential defaults arise from housing debt with an average LTV of 70%, thus limiting financial exposures of affected borrowers and losses to the banking system. Furthermore, as elaborated in the Financial Stability Review 2H 2019, borrowers with

[21] Refer to the Information Box on "Forecasting Households' Time to Default – Enhancements to the Financial Margin Framework" for further details.

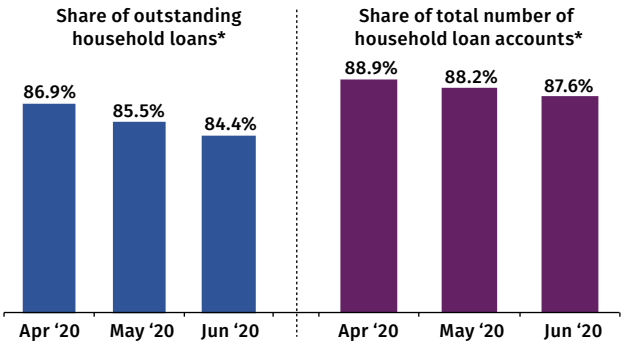
positive equity[22] are less likely to default on their housing loans. For households with lower income and financial buffers, income support measures will remain important to avoid further financial hardship.

While the automatic moratorium provided borrowers the flexibility to manage their finances, many are resuming repayments in light of clearer economic prospects

In recent months, more borrowers have started to resume their loan repayments as their income and employment prospects became clearer (Chart 1.23). Many of the borrowers who recently opted out of the loan moratorium are also those with larger loans, earning salaried income above RM5,000 a month. Given that around 70% of household debt comprise floating rate loans, debt serviceability after the moratorium will be further supported by lower monthly debt obligations following successive OPR cuts during the year.

With the automatic moratorium in place, aggregate impairment and delinquency ratios remained low at 1.0% and 0.9% of total outstanding household debt, respectively (2019: 1.2% and 1.1%). Household asset quality is expected to see some deterioration in 2H 2020 and throughout 2021 after the automatic moratorium ends, but banks are well-positioned to absorb higher credit losses (refer to the Chapter on 'Financial Institution Soundness and Resilience' for further details). Asset quality is also expected to remain supported by the transition to more targeted assistance measures and gradual improvements in the income and employment outlook.

Chart 1.23: Household Sector – Coverage of Loan Moratorium in the Banking System



*Excludes credit cards

Source: Bank Negara Malaysia

[22] Defined as outstanding loan held by a borrower being lower than the market value of the corresponding house. Refer to the Information Box on 'Can Malaysian Households Survive a House Price Shock?' in Financial Stability Review 2H 2019 for further details.

OPERATIONAL RISK

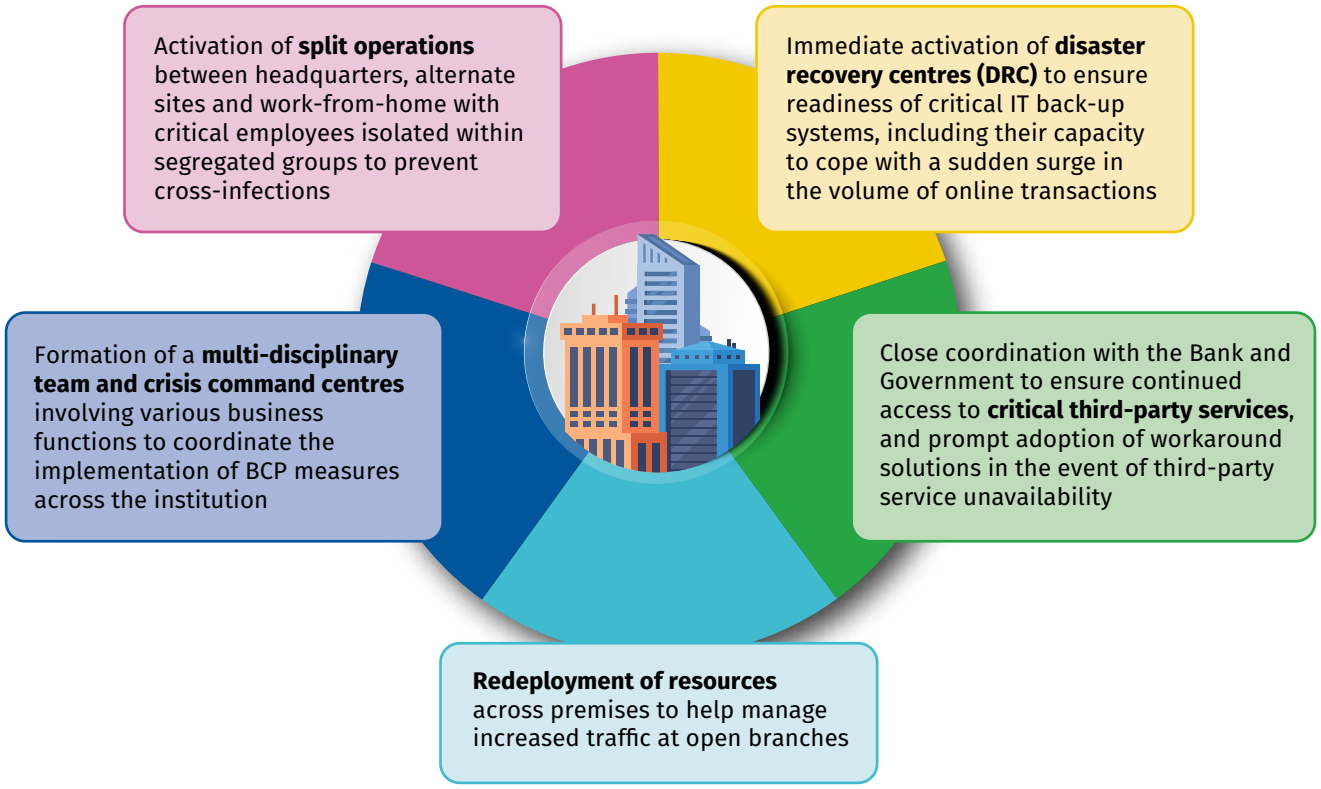
There were no operational disruptions despite heightened operational risks during the pandemic, and financial institutions are taking further steps to strengthen business continuity plans

The pandemic presented new operational challenges which tested the agility of financial institutions' business continuity plans (BCPs). Notwithstanding heightened operational risks, financial institutions successfully activated BCPs which enabled the continued provision of essential financial services to the public, while protecting the health and wellbeing of staff and customers (Diagram 1.2).

The implementation of the MCO to contain the outbreak also introduced additional restrictions that required financial institutions to swiftly adapt their operations in ways that were not previously contemplated in most BCPs (further elaborated below).

The immediate establishment of a centralised communication channel between the Bank and the industry prior to the onset of the MCO was critical to effectively coordinate the implementation of health measures across the financial sector. It also supported the swift transmission of critical information on operational risk incidents throughout the MCO period which enabled financial institutions to take pre-emptive measures to protect their staff, customers and operations on a continuous basis. Financial institutions largely continued to operate within their recovery time objectives for critical operations, supported by increased resources and management attention directed towards ensuring system resilience throughout the MCO period.

Diagram 1.2: BCP Responses by Financial Institutions during the Pandemic



Source: Bank Negara Malaysia

While financial institutions remained operationally resilient, they are taking steps to further enhance existing BCPs to specifically incorporate measures to respond to a pandemic event:

i. **Preparation for prolonged or widespread disruptions to business**
BCPs typically have been designed to respond to disruptions that are either temporary in nature, or contained to a limited number of locations, facilities or systems, such as those caused by power or infrastructure failures, cyber-attacks and natural disasters. While some BCPs included pandemics as a potential scenario, few financial institutions envisioned disruptions to business operations that could arise from multiple waves of a pandemic affecting different parts of the country and the world over an extended period of time. For instance, financial institutions assumed that operations could continue to function by 'swinging' to disaster recovery centres (DRCs), and by ensuring staff are split between production and recovery centres. However, movement restrictions under a nationwide MCO forced financial institutions to rely heavily on remote working arrangements to support split operations or alternative sites. At the height of the pandemic, staff working from home accounted for up to 70% of the total industry workforce. The enforcement of remote working arrangements and higher staff absenteeism due to quarantine measures also necessitated swift adjustments to business processes with a corresponding increase in unplanned IT needs for remote working. Therefore, financial institutions will need to review their risk assessments under a pandemic scenario to identify the potential impact on their resources, IT capacity and capability to support large-scale remote working arrangements and the increased usage of online banking services over a prolonged period.

ii. **Readiness for a full shutdown of the headquarters**
While BCPs generally contemplated the inability of financial institutions to access their main premises, some financial institutions struggled to swiftly shift their entire operations to alternate sites and/or remote working arrangements after the location of their headquarters or main offices were subjected to enhanced MCO (EMCO). The experience highlighted the need to improve continuity planning particularly to maintain effective controls over critical functions that are generally reliant on the physical presence of staff such as treasury operations, call centres and IT support. For example, financial institutions are setting up alternative controls to ensure the secure handling of customers' and other confidential information by call centres and treasury staff working from home, and preparing multiple alternative sites to locate critical staff who are not able to conducively perform their functions from home. Financial institutions also need to ensure that they maintain and regularly review their list of critical activities and staff, including pre-identified replacement staff who should be provided with continuous practical training to ensure their readiness to perform such activities at all times.

iii. **Reliance on critical third-party service providers**
The pandemic revealed instances in which the industry's increasing reliance on third-party service providers to support critical business operations had not been adequately acknowledged and addressed in financial institutions' BCPs. For instance, in the general insurance business, loss adjusters that are critical in assessing damage claims could not perform site visits, thus causing interruptions in the claims process. Many external IT vendors and support staff could not provide timely technical support as a result of movement restrictions, raising the risk of systems failure. Some banks also had to ration the issuance of replacement credit and debit cards, as they could not replenish their stock of cards. Financial institutions will need to holistically review their existing arrangements for communicating and coordinating with third-party service providers to secure assurances on the state of BCP preparedness of these entities, and assess their own ability to move critical functions in-house or to alternative service providers when necessary.

iv. Robustness of Security Operations Centre (SOC)

In an environment of diverse and increasing connectivity to internal corporate networks, financial institutions require SOCs that are capable of monitoring their technology security postures. During the pandemic, connectivity notably increased due to greater reliance on remote working arrangements, higher number of end-point devices and external connections, and the rising volume of online financial transactions, thereby prompting financial institutions to review the capability and coverage of SOC surveillance. For SOCs managed by a third party, BCPs will also need to incorporate appropriate contingency plans to ensure continued surveillance over cyber and end-point security.

No spike in operational risk losses and incidents, but emerging risks warrant continued vigilance

Despite the operational challenges arising from the pandemic and MCO, operational risk losses have remained broadly stable. Nonetheless, the Bank and financial institutions remain vigilant to risks associated with operational adjustments that financial institutions have made to conform to new norms of physical distancing. These include:

- Increased exposures to cyber-attack risks arising from the implementation of teleworking arrangements and greater reliance on digital platforms;
- Risks of information leakage and data theft from operations conducted in home-based environments;
- Human error amid an anticipated increase in exception handling and manual interventions to minimise operational disruptions. Ineffective communication during split operations and changes to standard operating procedures may also increase risks of errors and omissions; and
- Potential cross infections at work premises following the gradual return of staff to the workplace amid a continuing threat of subsequent waves of COVID-19 infections.

Payment and settlement systems maintained operational continuity without major disruptions

Malaysia's payment systems continue to operate smoothly without major disruptions, with the large-value payment system, Real-time Electronic Transfer of Funds and Securities System (RENTAS),[23] and retail payment systems maintaining high system availability above 99.9%. Enhancements to the payment systems that were successfully completed prior to the implementation of MCO further reduced the risk of disruptions. As a result, the number of incidents that caused isolated disruptions to RENTAS and retail payment systems declined significantly in 1H 2020 by 24% and 43%, respectively, compared to the same period last year. Despite an increase in payment transactions due to, among others, the surge in e-commerce activity and implementation of Government measures such as *Bantuan Prihatin Nasional*, both RENTAS and retail payment systems were able to meet the increased demands on capacity.

BCPs that included activating recovery centres, implementing split operations between various sites and enhancing remote access capabilities were effectively implemented by the payment system operators and have enabled continued operations with no major disruptions. The close coordination and communication between payment system operators and participants through the activation of Crisis Management Teams (CMTs) further ensured the timely implementation of corrective measures to minimise risks of potential disruptions. Similar to financial institutions, payment system operators are also enhancing their BCPs to reflect insights and lessons from the pandemic as part of ongoing measures to preserve operational continuity.

[23] RENTAS is a real-time gross settlement system for interbank fund transfers, debt securities settlement and depository services for scripless debt securities.

Measures to Mitigate the Impact of the COVID-19 Pandemic and Preserve Financial Stability

This box article elaborates on the measures taken by Bank Negara Malaysia (the Bank), in coordination with the banking and insurance/takaful sectors, to assist borrowers affected by the COVID-19 pandemic.

In response to the significant economic disruption brought on by the COVID-19 pandemic and measures taken to contain its spread, the Bank introduced broad-ranging measures to help businesses and individuals weather this difficult period. The measures are aimed at supporting the economy through the large, temporary shocks experienced, and thereby avert longer-term harm to the economy. At the same time, ensuring that the pandemic does not evolve into a financial crisis continues to be of paramount importance to secure a swift and firm economic recovery.

Measures Introduced in the Banking Sector

In the banking sector, measures were focused on: (i) extending immediate cashflow relief to individuals and businesses to preserve jobs and livelihoods; (ii) providing appropriate regulatory and operational flexibilities for banking institutions to respond swiftly to borrowers in need; and (iii) preserving the smooth functioning of the financial intermediation process to support economic recovery and post-COVID-19 economic restructuring and reforms.

Easing cashflow constraints of individuals and businesses (Diagram 1)

Phase 1: Measures to provide immediate cashflow relief following the implementation of the Movement Control Order (MCO)

While banking institutions have been pro-actively supporting borrowers facing financial difficulties through loan/financing rescheduling and restructuring since early-February, the MCO lockdown and temporary closure of businesses in mid-March 2020 posed significant logistical challenges to these efforts as increasingly larger numbers of borrowers required repayment assistance. Also of particular concern was the disproportionately larger impact of the economic and social disruptions on individuals with lower income and smaller businesses.

After a brief consultation with the banking industry and taking into account the practical conditions presented at the time, the Bank and the industry agreed to implement an automatic deferment of all eligible loan/financing repayments for a period of six months from 1 April 2020 for individuals and small and medium enterprises (SMEs). Borrowers who did not wish or need to defer their loan/financing repayments could continue to make their scheduled payments. This enabled banking institutions to deliver immediate relief on a large scale to individuals and SMEs through a very difficult period of financial pressure and low mobility. At the same time, banking institutions' operational resources were reallocated to focus on supporting corporates in need of assistance by restructuring and rescheduling their loans/financing even though these were not covered under the automatic deferment programme.

Temporary exemptions from credit reporting under the Central Credit Reference Information System (CCRIS) were also provided to alleviate concerns among borrowers that availing themselves of the relief measures would affect their credit history and future access to credit. The reporting exemption acknowledges the exceptional conditions that existed, and still exist to some degree, which would substantially reduce the value of credit reporting information as an indicator of a borrower's normal expected repayment behaviour.

Banking institutions were well-positioned to support the automatic deferment programme on such a scale given the large financial buffers that have been built up over the years. As at end-June 2020, the total capital ratio of the banking system stood at 18.3% with aggregate excess capital buffers of RM122 billion, while the liquidity coverage ratio was 149.2%. As a pre-emptive measure, the Bank also reduced the Statutory Reserve Requirement (SRR) ratio by 100 basis points. Coupled with the additional SRR flexibilities granted to Principal Dealers, this released approximately RM30 billion in additional liquidity into the banking system.

At the start, more than 95% of individual and SME borrowers took up the automatic repayment deferment. Up to 25 September 2020, 840,000 individual and SME borrowers have opted out, or already started to resume repayments in line with the improved economic conditions. This number is expected to increase further following the end of the automatic repayment deferment. For those who still face difficulties to resume repayments, banking institutions will continue to provide more targeted repayment assistance upon request by borrowers.
To date, banking institutions have facilitated requests for repayment assistance of close to 480,000 individuals and 34,400 SMEs in COVID-19-affected sectors. As noted in the Credit Risk section in Chapter 1, the automatic nature of repayment deferments for individuals and SMEs is likely to mask the actual number of borrowers who did, and may continue to, suffer from increased financial pressures. The Bank expects the actual impairment could also be milder than initially anticipated in light of improving signs of recovery.

Phase 2: Measures to support recovery with the gradual easing of the MCO
The gradual easing of the MCO since early-May 2020 saw businesses resuming operations and individuals being able to return to work in phases. With that, many borrowers who initially opted for the moratorium started to resume their loan/financing repayments. Some borrowers however, could continue to face challenges in meeting their financial obligations due to the uneven recovery across different sectors of the economy.

The Bank's next phase of measures has therefore shifted towards a more targeted approach in line with the gradual recovery in economic activities. This approach serves to–

- ensure that repayment assistance continues to be provided to borrowers who need it based on their specific financial circumstances;
- preserve the financial buffers of banking institutions to absorb higher expected credit losses due to the impact of the pandemic, and support new lending/financing as the economy enters the recovery phase. Further erosion of banking institutions' financial buffers under a blanket deferment would increase risks of constraints in credit supply to the economy and losses to depositors and public investments; and
- balance the longer-term interests of borrowers by reducing the overall costs they bear for repayment assistance. Behaviourally, this is achieved by ensuring that only borrowers that need further assistance apply for it, while those that can resume their repayments, do so at the earliest opportunity.

Diagram 1: Measures to Ease Cashflow Constraints of Individuals and Businesses

Phase 1: Measures to provide immediate cashflow relief following implementation of the MCO

Broad-based repayment assistance

- Automatic 6 months deferment on all eligible loan/financing repayments for individuals and SMEs
- Conversion of credit card balances into term loans/financing
- Rescheduling and restructuring of corporate loans/ financing

Phase 2: Measures to support recovery with the gradual easing of the MCO

Targeted repayment assistance

- Additional 3 months deferment of loan/financing repayments for unemployed borrowers
- Proportionate reduction of loan/financing repayments for borrowers with reduced income
- Suspension of increase in pricing for repayment in arrears between 1 October to 31 December 2020

- Exemption from "rescheduled and restructured" and "credit impaired" tagging in CCRIS

Source: Bank Negara Malaysia

The number of borrowers who require an extended period of repayment assistance may still be large, relative to the experience of banking institutions under normal conditions. This calls for banking institutions to ensure that they allocate appropriate resources and management attention to repayment assistance efforts, including effectively monitoring the attendant risks arising from these efforts. To this end, banking institutions are required to establish dedicated command centres accountable to oversee and coordinate the implementation of the banking institutions' repayment assistance strategy under a "whole of bank" approach. Such an approach supports the ability of banking institutions to handle a surge in customer enquiries and requests, while providing greater visibility, control and speed in transitioning from the automatic loan/financing repayment deferment to more targeted repayment assistance.

As part of the transition, the Bank also requires banking institutions to suspend the repricing of loans/financing due to missed payments between 1 October and 31 December 2020. This is intended to provide borrowers with an adequate opportunity to finalise their repayment assistance plans with banking institutions after the end of the blanket moratorium on 30 September 2020.

For Islamic banking institutions, additional requirements were introduced to further alleviate the financial hardship and operational burden faced by customers that sought payment assistance. Premised on the Shariah principle of *ihsan* (beneficence), the Shariah Advisory Council of the Bank has prohibited the capitalisation of accrued profits for facilities that are restructured and rescheduled as part of payment assistance extended to customers affected by COVID-19. The ruling aims to reduce the overall financial impact from restructuring and rescheduling on customers who are already adversely affected by the pandemic. To further ease operational burden and avoid additional cost, Islamic banking institutions are allowed to execute the restructuring of a financing facility using a supplementary agreement, without the need for a new agreement provided the same type of contract is used.

Regulatory and supervisory measures to facilitate repayment assistance programmes and support lending/financing to the real economy (Diagram 2)

Wide-ranging regulatory and supervisory measures were deployed by the Bank to provide additional operational capacity for banking institutions to effectively manage and respond to the impact of the pandemic crisis. This included clarifying the application of prudential and conduct requirements to avoid cliff effects and unintended operational frictions which could hurt critical lending/financing activity and repayment assistance efforts. Several earlier planned measures to improve the overall consistency of the capital and credit risk management frameworks were also brought forward to enhance the capacity of banking institutions to support economic activity. In addition, timelines for a number of regulatory and supervisory initiatives were temporarily deferred to enable banking institutions to better manage their resources at this time. These measures are not expected to materially impact the financial strength and resilience of banking institutions.

Diagram 2: Regulatory and Supervisory Measures to Facilitate Repayment Assistance Programmes and Support Lending to the Real Economy

Flexibilities to facilitate repayment assistance

- Clarify conditions for defining default under the capital adequacy framework
- Clarify flexibility to undertake multiple repayment assistance within a defined period
- Exclusion of deferment period from the determination of period in arrears for regulatory and accounting classifications

Expand operational capacity to support lending

- Rationalise lending limits applied to the broad property sector and share financing
- Allow drawdown of the capital conservation buffer of 2.5%
- Allow banking institutions to operate below the minimum liquidity coverage ratio of 100%
- Allow banking institutions to reduce regulatory reserves held against expected losses to 0%
- Allow banking institutions to comply with minimum Net Stable Funding Ratio (NSFR) requirement of 80%

Banking institutions are expected to restore their buffers and comply with minimum NSFR of 100% by 30 September 2021

Ease compliance and operational burden

- Extend timelines for regulatory, supervisory and statistical submissions

Source: Bank Negara Malaysia

Preserve the smooth functioning of the financial intermediation process to support economic recovery and post-COVID-19 economic restructuring and reforms (Diagram 3)

Complementing the financing schemes offered by the Government and financial institutions, the Bank enhanced the existing financing facilities under the BNM's Fund for SMEs (the Fund) and increased the allocation of these facilities to ease lending/financing conditions for viable SMEs during this challenging period. The Fund's allocation was expanded by RM9 billion to RM18.1 billion to support lending to SMEs. Of this amount, RM10 billion was provided under the Special Relief Facility (SRF) which was introduced specifically to support the cashflow needs of viable SMEs affected by the pandemic.[1] A total of 21,000 SMEs received assistance under the SRF which helped to preserve more than 450,000 jobs in SMEs across states and business sectors. SMEs were also able to avail themselves of other financing facilities under the Fund[2], with RM2.6 billion worth of funds still available for new applications as at end-September 2020. These facilities have helped to temper signs of some tightening in bank lending/financing to SMEs. In the first half of 2020, the banking system as a whole disbursed a total of RM120 billion in lending/financing to SMEs, with more accounts being approved in 2020 compared to the same period in previous years (1H 2020: 65,597 accounts; 1H 2019: 57,367 accounts). The average financing size has however declined with more SMEs applying for lower financing amounts, mainly to tide through the pandemic. Policy measures, including credit guarantee schemes and easier access to the Fund, also continue to support access to financing for SMEs.

Diagram 3: Preserving the Smooth Functioning of the Financial Intermediation Process to Support Economic Recovery and Post-COVID-19 Economic Restructuring and Reforms

SRF	AES	PTF	ADF	AF	MEF
RM10 bil	*RM5 bil*	*RM1 bil*	*RM300 mil*	*RM1.5 bil*	*RM300 mil*
• Alleviate short-term cashflow	• Enhance access to financing	• Aid SMEs in the tourism sector	• Incentivise automation and digitalisation	• Increase food production	• Collateral-free financing for micro enterprises

* Special Relief Facility (SRF); All Economic Sectors (AES) Facility; PENJANA Tourism Financing (PTF); Automation and Digitalisation Facility (ADF); Agrofood Facility (AF); Micro Enterprises Facility (MEF)

Source: Bank Negara Malaysia, Ministry of Tourism, Arts and Culture Malaysia

[1] For details on the SRF beneficiaries, refer to https://www.bnm.gov.my/index.php?rp=srf_en.

[2] Excluding SRF, other financing measures under the Fund totalled RM8.1 billion, including RM1.5 billion Agrofood Facility (AF), RM300 million Automation and Digitalisation Facility (ADF), RM5 billion All Economic Sectors (AES) Facility, RM300 million Micro Enterprises Facility (MEF) and RM1 billion PENJANA Tourism Financing (PTF). For further details, refer to https://www.bnm.gov.my/covid19/bnmfunds.php

Measures Introduced in the Insurance and Takaful Sector

A series of temporary relief measures was also provided by insurers and takaful operators (ITOs) to assist insurance policyholders and takaful participants who faced financial constraints arising from the COVID-19 pandemic. These measures helped to alleviate cash flow issues while avoiding a loss of insurance and takaful protection.

Flexibilities to meet payments for insurance premiums and takaful contributions

Life insurers and family takaful operators collectively agreed to offer individuals and SMEs affected by COVID-19 an option to defer payment of their life insurance premiums and family takaful contributions for a period of three months. Policyholders and takaful participants could also avail themselves of other forms of assistance offered by life insurers and family takaful operators based on their protection needs and affordability. These included extending the revival and reinstatement period for policies and certificates which have lapsed, providing alterations of policies and certificates without any fees/charges, and waiving penalties or late payment charges where policyholders and takaful participants were unable to access electronic payment channels during the MCO.

General insurers and takaful operators similarly rolled out assistance to affected policyholders and takaful participants by granting options to restructure their insurance policies and takaful certificates, with flexibility provided on payment terms for premiums and contributions.

Over 57,000 life insurance policyholders and family takaful participants took up the option to defer insurance premiums and takaful contributions amounting to about RM71 million up to September 2020. Meanwhile, general insurers and takaful operators facilitated payment deferments and the restructuring of insurance and takaful plans involving 6,500 insurance policies and takaful certificates, with insurance premiums and takaful contributions amounting to about RM104 million.

Other relief measures to alleviate the financial burden of affected policyholders and takaful participants

ITOs also waived exclusions, co-payments and waiting periods, and expedited processing of insurance and takaful claims related to COVID-19. This included claims for the costs of COVID-19 tests and personal protective equipment incurred in connection with medical treatments covered by insurance policies and takaful certificates. Further, a number of ITOs deferred the repricing of their medical and health insurance policies and takaful certificates until 2021 to alleviate financial burden on policyholders and takaful participants.

In further support of efforts to ramp up COVID-19 testing and reduce the risk of infection in the community, the insurance and takaful industry committed an amount of RM8 million to fund COVID-19 testing for eligible individuals who have medical insurance policies and takaful certificates.

Regulatory and supervisory measures to facilitate premium/contribution deferment

As for banking institutions, regulatory and supervisory measures were also extended to ITOs to support their efforts in managing and responding to the impact of COVID-19. Among these were bringing forward planned enhancements to improve the risk capture and overall consistency of the risk-based capital frameworks for ITOs (RBC Frameworks). Further details of the measures are provided in Diagram 4.

Diagram 4: Regulatory and Supervisory Measures to Facilitate Premium/Contribution Deferment

Enhanced risk capture in line with RBC enhancements

- Adjustments to the stress factor caps of interest/profit rate risk capital charges, from 40% to 30%, effective from 31 March 2020
- Consideration for ITOs to adopt alternative enhanced methodologies for calculating interest/profit rate risk capital charges

Temporary measures to facilitate assistance to affected policyholders/takaful participants*

Capital	• Waive credit risk capital charge for exposures related to deferred premiums/ contributions • Allow drawdown of capital buffers below the Individual Target Capital Level on a case-by-case basis
Investment-linked business	• Flexibility on compliance with sustainability requirements for premiums/ contributions • Simplified disclosure of sustainability outcomes for policy/certificate alterations, subject to appropriate safeguards
Reverse repo	Allow access to the Bank's reverse repo facility to meet liquidity needs

Ease compliance and operational burden

- Extend timelines for regulatory, supervisory and statistical submissions

*This covers:

(a) Individuals who have been infected by COVID-19, subject to mandatory home quarantine due to contact with a COVID-19 patient or those who have suffered a loss of income as a result of the COVID-19 situation; and

(b) SMEs which have suffered a loss of income as a result of the COVID-19 situation. Examples of events that lead to such loss of income include: (i) For individuals: retrenchment, shorter working hours, no pay leave and salary or commission cuts; and (ii) For self-employed and SMEs: loss of business income.

Source: Bank Negara Malaysia, Life Insurance Association of Malaysia, General Insurance Association of Malaysia and Malaysian Takaful Association

Financial Institution Soundness and Resilience

Financial Institution Soundness and Resilience

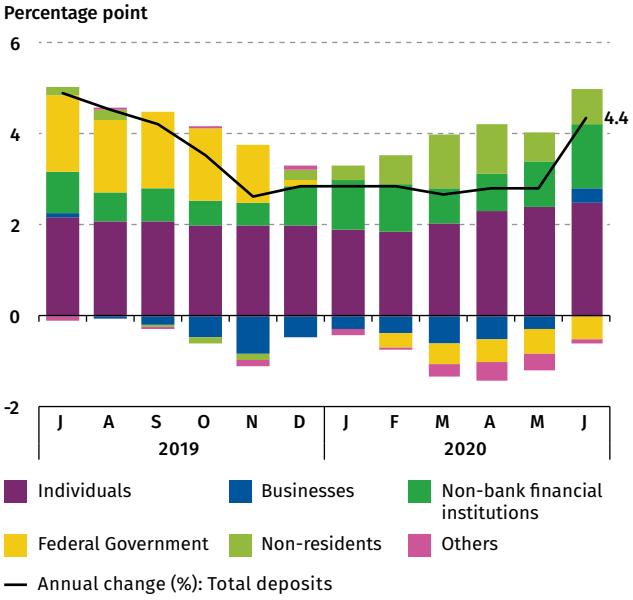
THE BANKING SECTOR

Strong liquidity position enabled banks to support financial intermediation and the implementation of various relief measures

The liquidity position of banks has remained healthy despite the deferment of close to 90% of retail loan repayments under the automatic moratorium.[1] This has been supported by the strong initial buffers of banks as well as higher deposit growth from precautionary cash holdings, particularly among individual depositors in the second quarter (Chart 2.1). Along with the reduction in the Statutory Reserve Requirement (SRR) by 100 basis points (bps) in March and the additional SRR flexibilities which released more liquidity into the banking system, banks consequently had less need for interbank funding and had not resorted to the flexibility granted for banks to operate below the minimum Liquidity Coverage Ratio (LCR) of 100%. Throughout the first half of 2020, the banking system LCR remained around 140% or higher (December 2019: 149.1%) (Chart 2.2). Funding conditions in the banking system also remained stable with the loan-to-fund ratio at 82.0% (December 2019: 83.2%) (Chart 2.3). All banks were well-positioned to meet the minimum Net Stable Funding Ratio (NSFR) requirement of 80% which came into effect in July 2020.

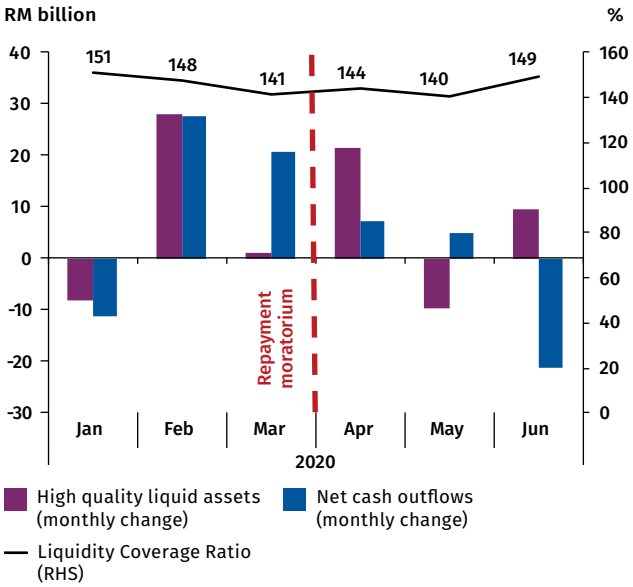
[1] Malaysia was among the first and only few countries in the world to implement an automatic deferment of loan/financing repayments for eligible borrowers.

Chart 2.1: Banking System – Contribution to Growth in Deposits Accepted



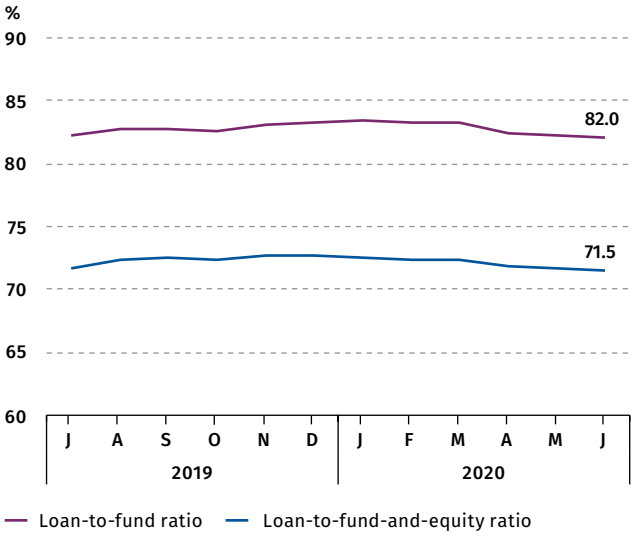
Source: Bank Negara Malaysia

Chart 2.2: Banking System – Liquidity Coverage Ratio, High Quality Liquid Assets and Net Cash Outflows



Source: Bank Negara Malaysia

Chart 2.3: Banking System – Loan-to-Fund Ratio and Loan-to-Fund-and-Equity Ratio



Source: Bank Negara Malaysia

Risks posed by external and cross-currency funding remained manageable

Risks from external debt exposures of banks continue to be manageable given their low dependence on external funding which has remained broadly stable below 10% of total funding over the years. Most of the increase in banks' external debt of RM22.9 billion in 1H 2020 was attributable to increased intragroup borrowings by foreign banks in the Labuan International Business and Financial Centre (LIBFC) in line with their 'out-out' business activities (Chart 2.4). While some onshore banks[2] increased cross-currency borrowings in 1Q 2020 to manage short-term liquidity needs from maturing deposits and demand for domestic FCY loans, this has since been pared back in 2Q 2020 amid lower domestic funding costs. More than 60% of banks' external exposures continue to be in the form of intragroup placements and long-term debt securities, which are less susceptible to sudden withdrawal or rollover risk (Chart 2.5). Banks' foreign exchange net open position (FX NOP) also remained below levels recorded in recent history (5-year average: 5.6%) (Chart 2.6). It has, however, risen from end-2019 levels amid an increase in banks' risk appetite particularly after the earlier stress in the USD funding market subsided following significant liquidity injections by the Federal Reserve to ease market strains. Banks continued to maintain steady holdings of liquid FCY assets which are sufficient to cover more than three times their FCY external 'debt-at-risk' (Chart 2.7).[3]

Banks' cost of funds continued to be on a declining trend amid strong pass-through of the successive Overnight Policy Rate (OPR) cuts to deposit and money market rates (Chart 2.8). The shift towards more liquid and shorter-term deposits has also kept the costs of funds relatively low. Greater uncertainty among households and businesses has led to a preference for holding cash in more liquid current and savings accounts (CASA), while competition among banks for longer-dated fixed deposits has also eased on expectations of further OPR cuts. (Chart 2.9). In the near term, banks' funding costs are expected to remain low as banks gradually reprice deposits to incorporate the most recent OPR cuts.

[2] Refers to domestic banking groups (DBGs) and locally-incorporated foreign banks (LIFBs).

[3] Banks' external 'debt-at-risk' comprises financial institutions' deposits, interbank borrowings and short-term loans from unrelated non-resident counterparties which are considered more susceptible to sudden withdrawal shocks.

Chart 2.4: Banks' External Debt – by Instrument

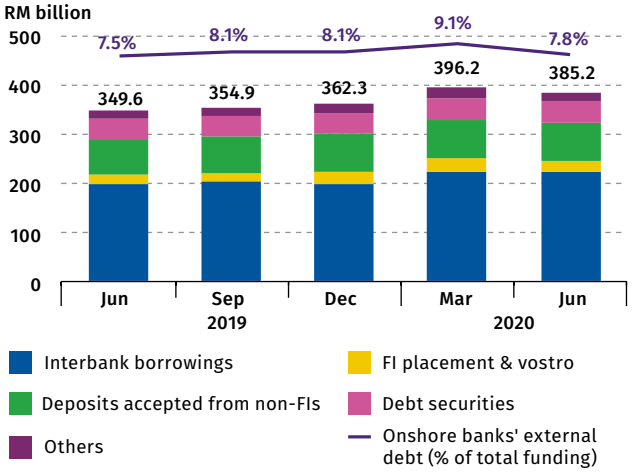


Chart 2.5: Banks' External Debt – by Type of Exposure and Instrument

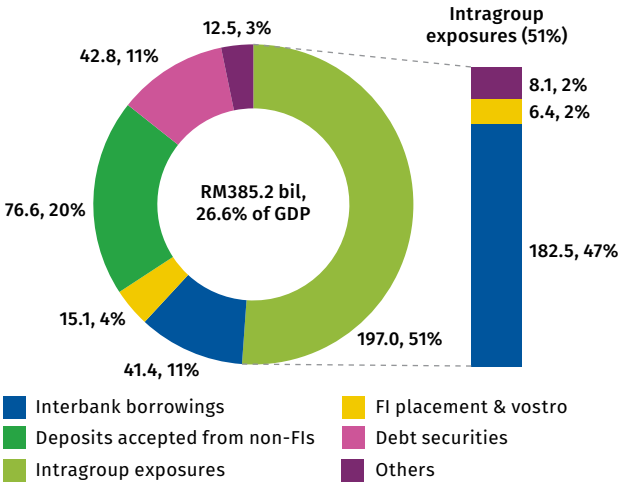


Chart 2.6: Banking System – FX and USD Net Open Positions as Percentage of Capital

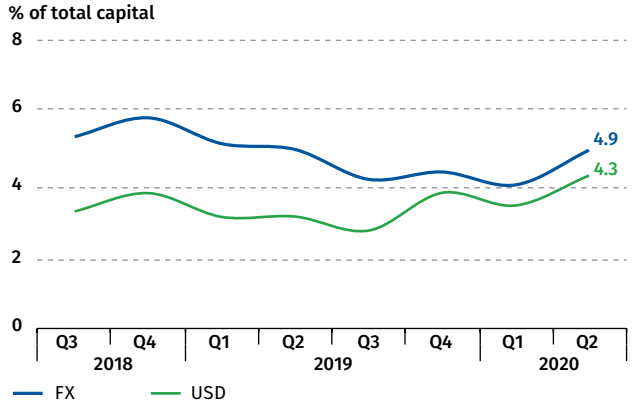
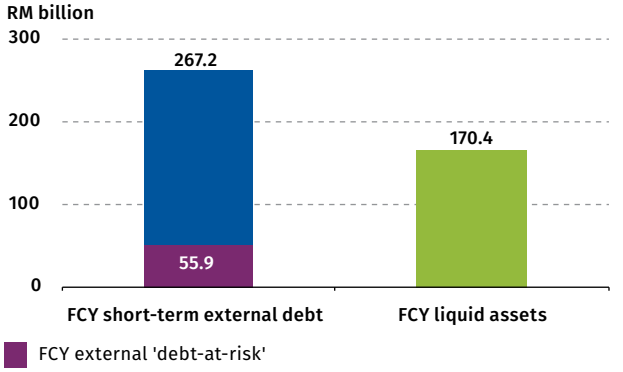


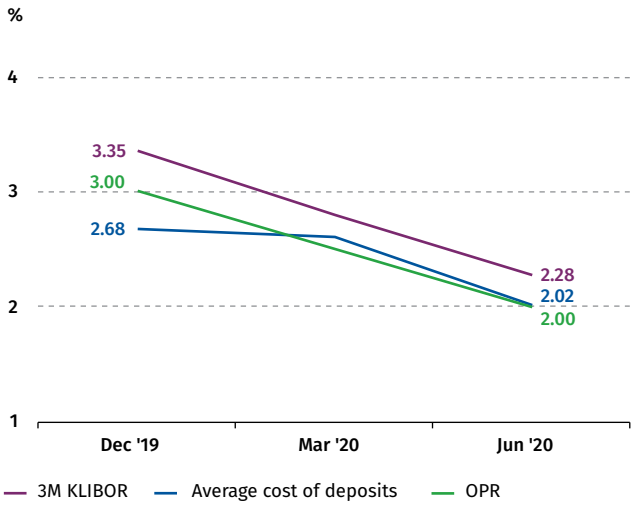
Chart 2.7: Banking System – FCY External 'Debt-at-Risk' and Liquid Assets



Note: 1. Banks' external debt in this context refers to external debt of DBGs, LIFBs, and LIBFC banks
2. Banking system or onshore banks refer to only DBGs and LIFBs
3. Liquid assets comprise cash and cash equivalents, unencumbered debt securities held and interbank placements

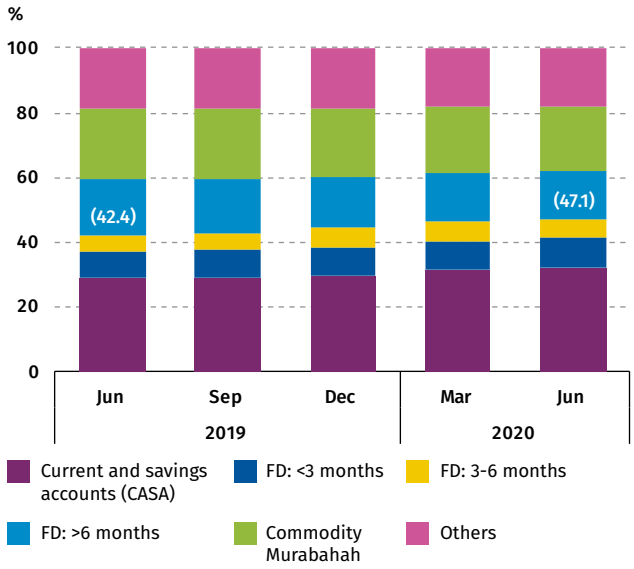
Source: Bank Negara Malaysia

Chart 2.8: Banking System – Average Cost of Deposits, Kuala Lumpur Interbank Offered Rate (KLIBOR) and Overnight Policy Rate (OPR)



Source: Bank Negara Malaysia

Chart 2.9: Banking System – Composition of Deposits by Type and Original Maturity



Note: (...) refers to the total share of CASA and fixed deposits (FD) with original maturity of up to 6 months

Source: Bank Negara Malaysia

Impairments remained low, but banks are cautious on the credit risk outlook

In April 2020, an automatic repayment moratorium was put in place for retail and SME loans that were performing prior to that date. This has kept banking system impairments low at 1.5% of total loans (2019: 1.5%; 5-year average: 1.6%) (Chart 2.10). At the same time, continuing debt recovery efforts on defaulted loans have also helped to reduce outstanding impairments.

A key challenge for banks in monitoring credit risk developments during this period has been the absence of borrowers' repayment information due to the extensive coverage of the loan moratorium. In response, banks have taken proactive measures to assess and manage risks by (i) engaging borrowers more directly on their recovery prospects; (ii) increasing the use of data analytics and alternative sources of information (such as facility utilisation rates, cash conversion cycles, and operating account balances) to establish the condition of borrowers; and (iii) working with credit reporting agencies to identify early-warning indicators. This has enabled banks to identify loans with higher credit risks and pre-emptively build up provisions against future potential losses to ensure their continued resilience. Provisions for loans classified as Stage 2[4] under MFRS 9 increased by RM1.7 billion in the first half of 2020 (June 2020: +27.9% annual growth; 2019: -5.9%), driven by businesses most affected by the pandemic.[5] Higher overall provisions set aside by banks in 1H 2020 (+RM2.7 billion to RM24.6 billion as at end-June 2020) also reflected banks' consideration of forward-looking information that takes into account the considerable uncertainty over the recovery path. While asset quality can be expected to deteriorate, the recovery in business activities amid continued fiscal and financial support to businesses and households will mitigate risks of defaults. Importantly, impairment levels have stabilised at historically low levels in recent years due to strengthened underwriting standards. This, together with prudent provisioning practices observed by banks, provides a strong starting position for banks to weather the expected rise in impairments in the period ahead.

[4] Stage 2 loans refer to underperforming loans, for which banks are required to set aside provisions based on lifetime expected losses.
[5] For example, construction, manufacturing, wholesale and retail, hotels and restaurants sectors.

Despite downward pressure on earnings, banks maintained healthy capital buffers

Banks reported a marked decline in earnings from domestic banking activities during the first half of the year (Chart 2.11), weighed down by further margin compression and higher provisions for credit losses. Annualised credit costs as a share of total outstanding loans[6] rose significantly from the low levels over the past decade to 56 bps (average for 2010-2019: 20 bps) – a level last seen during the 2008 Global Financial Crisis. Banks were also impacted by a one-off contract modification loss due to the waiver of additional interest charges for hire-purchase loans and fixed rate Islamic financing under the repayment moratorium measures. This further compressed narrowing margins from successive OPR cuts (Chart 2.12).

Trading and investment income, however, provided some support to profits as banks recorded gains from the sale of debt securities and fair value changes amid declining yields (Chart 2.13). By end-June 2020 however, banks had increased their holdings of government bonds to nearly half of the treasury portfolio (June 2020: 49%; December 2019: 42%; 2017-2019 average: 43%) amid higher issuances, additional liquidity from the SRR-related measures, and slower lending growth. Interest rate risks in the banking book correspondingly increased to 5.5% of total capital (2019: 4.4%), but remained well within prudent limits observed by individual banks. Measures to improve cost efficiency also continue to be pursued by banks to support profitability, including reviewing the timing of non-critical expenditures, renegotiating vendor contracts and accelerating ongoing digitisation efforts.

Market valuations of banks as measured by the median price-to-book (P/B) ratio have fallen further since 2019, reflecting the weaker macroeconomic outlook and earnings expectations. Bank-specific factors and more cautious investor sentiment also contributed to a fairly wide dispersion of P/B ratios across banks, with several banks reporting P/B ratios below one. Nonetheless, Malaysian banks' returns on equity and assets remain broadly in line with other banks in the region, and have declined to a lesser extent so far this year (Charts 2.14 and 2.15). The strong financial position of banks will also provide some support to earnings and preserve their ability to raise capital at lower costs from the market to support financial intermediation activities.

Limited spillover risks arising from banks' overseas operations despite the challenging economic environment

The overseas operations[7] of domestic banking groups (DBGs) also experienced a decline in profitability for the first half of 2020, as banks in the region were similarly affected by slower economic activity as a result of COVID-19 containment measures and a deterioration in asset quality (Chart 2.16). Risks from the overseas operations of DBGs are likely to be manageable, as banks' overseas credit exposures to sectors directly affected by the pandemic are relatively small, ranging between 0.1%-5.3% of overall group exposures. Major overseas subsidiaries also continue to maintain relatively high levels of capital, which serve as strong buffers against potential credit losses. This will limit the need for capital support from the domestic parent banks. Based on stress tests conducted by DBGs on their major overseas operations, most foreign subsidiaries have sufficient capital to withstand severe shocks amid the COVID-19 pandemic. Overseas operations of the DBGs also continue to be largely funded by local currency deposits, with liquidity ratios remaining above local regulatory requirements and internal targets (Chart 2.17).

[6] Excluding loans from domestic banks' overseas operations.

[7] Refers to DBGs' material offices (branches and subsidiaries) operating outside of Malaysia. Cumulatively, DBGs have presence in 14 overseas jurisdictions, with major operations in Singapore, Indonesia, Thailand and Hong Kong SAR.

Chart 2.10: Banking System – Gross Impaired Loans Ratio

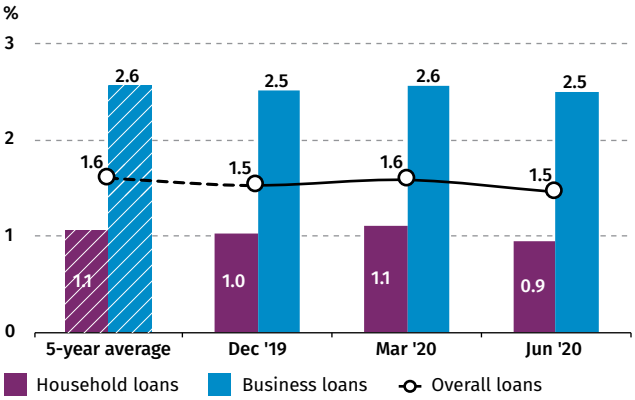


Chart 2.11: Banking System – Profitability

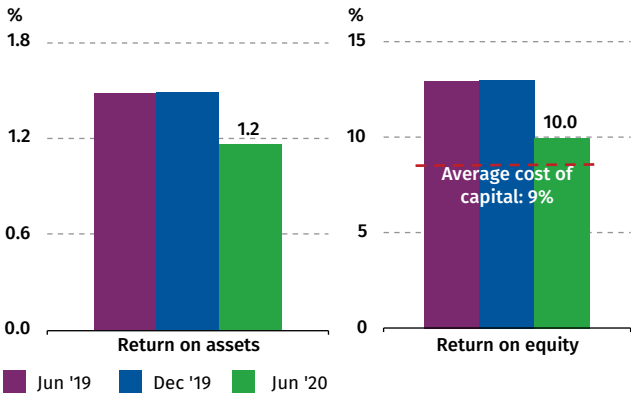


Chart 2.12: Banking System – Interest Margin

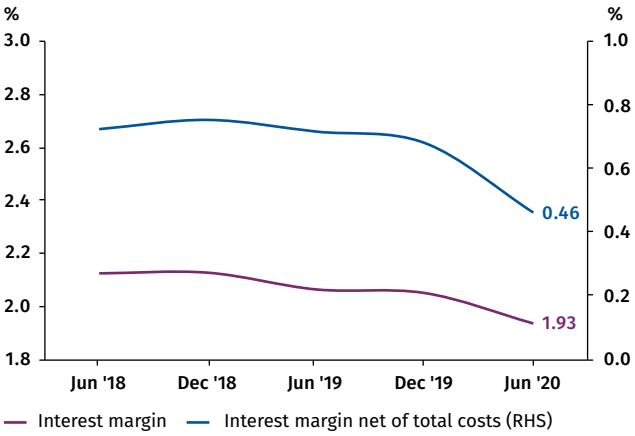


Chart 2.13: Banking System – Income, Cost and Profit before Tax

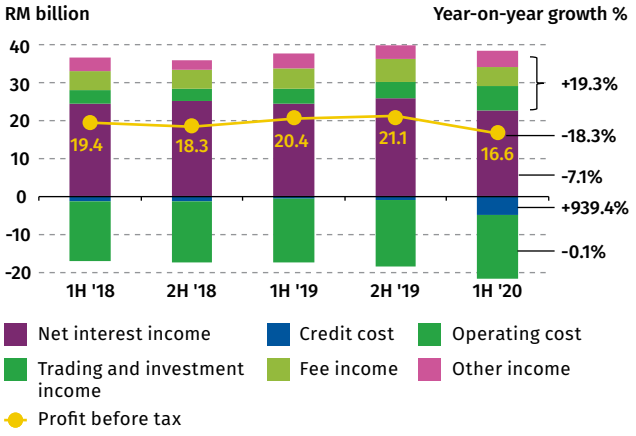


Chart 2.14: Banks' Return on Assets – Cross-country Comparison

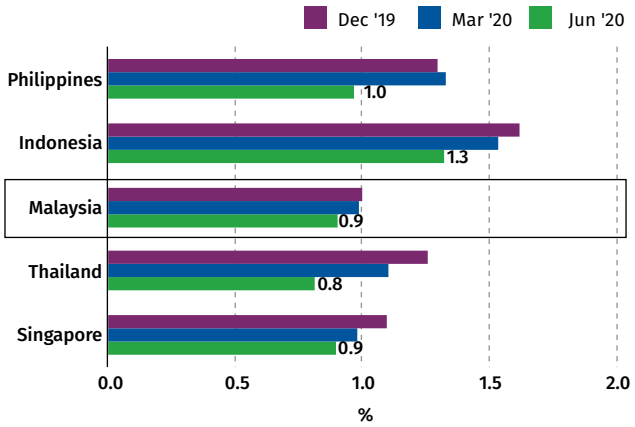
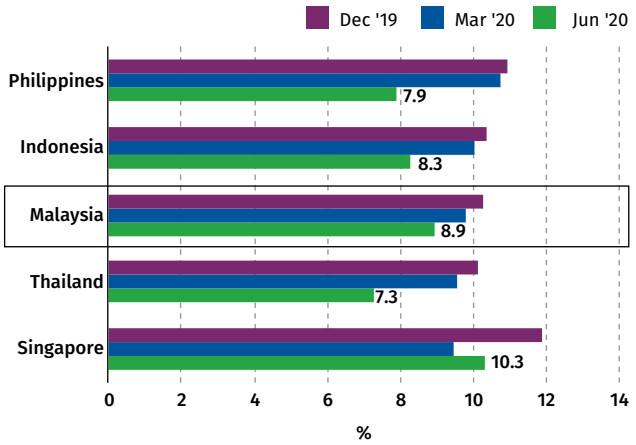


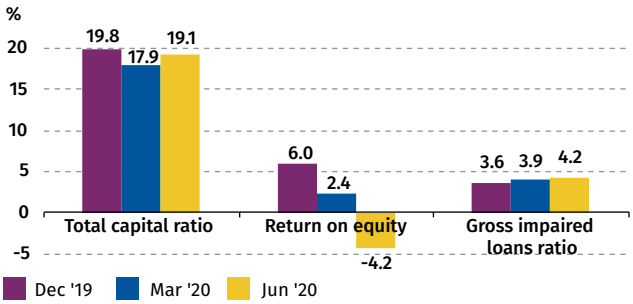
Chart 2.15: Banks' Return on Equity – Cross-country Comparison



Note: 1. The average cost of capital for Malaysian banks refers to the average expected annual stock returns for all listed banks estimated using a Capital Asset Pricing Model
2. Total costs refer to impairment provisions and operating costs
3. Year-on-year growth computed based on figures for 1H 2019 and 1H 2020
4. Cross-country comparisons refer to median figures reported by selected listed banks in each jurisdiction

Source: Bank Negara Malaysia and Bloomberg

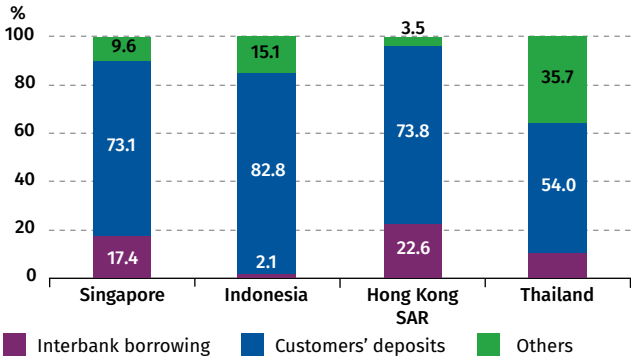
Chart 2.16: Banking System – Key Financial Indicators of Overseas Operations



Note: The average key financial indicators are weighted by the asset size of selected overseas operations

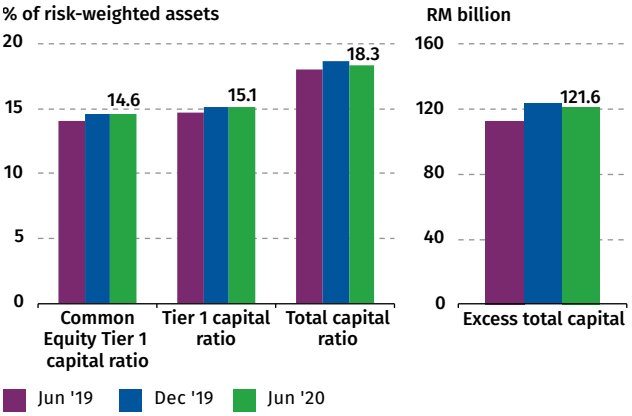
Source: Bank Negara Malaysia

Chart 2.17: Banking System – Funding Profile of Major Overseas Operations



Source: Bank Negara Malaysia

Chart 2.18: Banking System – Capital Ratios



Note: Excess total capital refers to total capital above the regulatory minimum, which includes the capital conservation buffer requirement (2.5%) and bank-specific higher minimum requirements

Source: Bank Negara Malaysia

All banks remained well-capitalised throughout the first half of 2020, with aggregate capital buffers[8] amounting to RM121.6 billion as at June 2020 (Chart 2.18). In anticipation of the more challenging economic outlook, banks are shoring up their buffers, either through new capital issuances or dividend reinvestment plans. Most banks have also reduced or deferred dividend payouts to shareholders.

As part of an annual cycle, the Bank completed its latest assessment on domestic systemically important banks (D-SIBs) based on end-2019 data submissions. The three banking groups designated as D-SIBs remain unchanged from the list published on 5 February 2020 (Table 2.1).[9] The identification of D-SIBs is based on an assessment methodology that combines an indicator-based measurement approach with supervisory judgment which considers factors not fully captured under the quantitative-based assessment. The designated D-SIBs already meet the higher loss absorbency (HLA) requirements that D-SIBs must comply with to reduce the probability of distress or failure during periods of stress.

Table 2.1: D-SIBs HLA Requirement

D-SIBs	HLA Requirement (% of risk-weighted assets)
Malayan Banking Berhad	1.0
CIMB Group Holdings Berhad	
Public Bank Berhad	0.5

Source: Bank Negara Malaysia

Underpinned by healthy buffers, the banking system continues to be well-positioned to support credit flows to the real sector as the economy gradually begins to recover. Banking system loans recorded an annual growth of 4.1% as of June 2020, mainly driven by growth in outstanding business loans in the wholesale and retail trade, hotels and restaurants, and manufacturing sectors. Following the gradual relaxation of the MCO, high disbursements for working capital needs were recorded in June. There was also strong demand for loans under the Special Relief Facility (SRF) and other targeted funds for SMEs established by the Bank. Financing conditions have been further supported by lower borrowing costs following recent monetary policy easing. In contrast, demand for financing by households was generally weaker reflecting more uncertain income and employment prospects. Banks are expecting some recovery in household loan growth in the second half of 2020 amid low borrowing costs and improving labour market conditions.

[8] Refer to capital held in excess of regulatory minimum, which includes the capital conservation buffer (2.5%) and bank-specific requirements.
[9] Please refer to https://www.bnm.gov.my/index.php?ch=en_press&pg=en_press&ac=4988&lang=en.

THE INSURANCE AND TAKAFUL SECTOR

Overall profitability declined for the insurance and takaful sector amid the challenging operating environment

The financial impact of COVID-19 has mainly affected insurers and takaful operators (ITOs) through the investment channel and lower new business. On aggregate, insurance and takaful funds recorded a decline in profitability in the first half of 2020. This was attributed to the life insurance and family takaful funds, which recorded unrealised losses from equity investments and a decline in new premiums amid movement restrictions during the MCO (Charts 2.19 and 2.20). However, higher gains from investments in bonds provided some support to overall investment performance and profits. The profitability of general insurance and takaful funds meanwhile improved slightly despite lower premium growth (Charts 2.21 and 2.22).

The underwriting performance of life insurance and family takaful funds improved during the period due to lower benefit payouts on medical and health policies in line with the deferment of elective procedures by both hospitals and policyholders. Policy surrenders and lapses were also lower during 1H 2020 due in part to the temporary relief measures. This included options for policyholders to defer the payment of premiums and avail themselves of premium holidays without affecting their coverage.[10] The impact of these measures on ITOs' profitability has been manageable due to the relatively short deferment period and a large share of life/family takaful policies already having such flexibilities built into the policy features. General ITOs meanwhile recorded higher underwriting profits from lower motor claims paid during the MCO and CMCO periods as fewer vehicles were on the road and repair workshops were closed.

In response to the COVID-19 pandemic, ITOs have revised their plans to re-price medical and health insurance policies/takaful certificates in an effort to reduce the financial burden of policyholders/takaful participants and preserve their coverage. The revised plans include deferring planned re-pricing for the year, providing refunds on any premium increase until end-2020, and extending the deferral of premiums to protect coverage. A number of ITOs have not re-priced medical and health insurance policies that have sustained underwriting losses in recent years despite rising medical cost pressures. However, the impact of further delaying planned re-pricing exercises is expected to be manageable given the healthy capital positions and overall profitability of ITOs (refer to the Box Article 'Measures to Mitigate the Impact of the COVID-19 Pandemic And Preserve Financial Stability' for further details on insurance and takaful relief measures).

Insurance and takaful sector remained well-capitalised

The aggregate capital adequacy ratio (CAR) of the insurance and takaful sector remained well above the regulatory minimum (Chart 2.23). In March 2020, the Bank implemented revisions to the stress parameters used for the computation of interest/profit rate capital charge under the Risk-based Capital (RBC) Framework for ITOs. The revised parameters better reflect prevailing market conditions by refining the sensitivity of ITOs' balance sheet to interest rate movements. This aims to ensure that the risk measures within the RBC Framework continue to provide an appropriate basis for the computation of capital levels that promotes the safety and soundness of ITOs under a range of stress conditions. These changes resulted in improvements to ITOs' capital positions, mostly among life insurers and family takaful operators.

Based on the Bank's sensitivity analysis, life insurers are expected to remain solvent should interest rates decline further, with aggregate industry CAR remaining comfortably above the regulatory minimum.[11] The healthy overall underwriting performance of most ITOs, along with a gradual improvement in new business growth in tandem with the economic recovery, will further support the strong capitalisation of ITOs.

[10] Premium deferment refers to the temporary relief measure where customers affected by COVID-19 can defer payments of life insurance premiums and family takaful contributions by three months between April and December 2020. Premium holiday refers to continued insurance/takaful coverage despite an absence of premium payments and applies to products with the premium holiday feature already in place such as investment-linked products. This is allowed as long as the investment value in the unit fund remains sufficient to meet the necessary insurance cost during the holiday period.

[11] Refer to the Information Box 'Assessing the Impact of Declining Interest Rates on Life Insurers' Solvency Positions' in FSR 2H 2019 for further details on the methodology.

Chart 2.19: Life Insurance and Family Takaful Fund – Composition of Income and Outgo

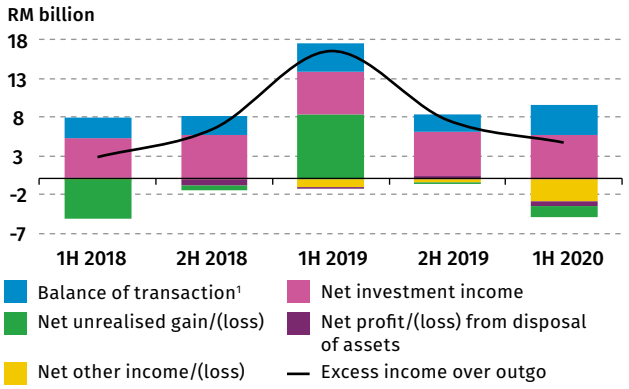


Chart 2.20: Life Insurance and Family Takaful Sector – New Business Premium Growth and Product Composition

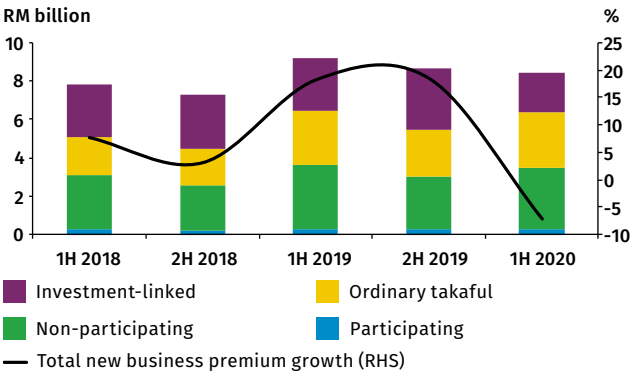


Chart 2.21: General Insurance and Takaful Fund – Composition of Operating Profits

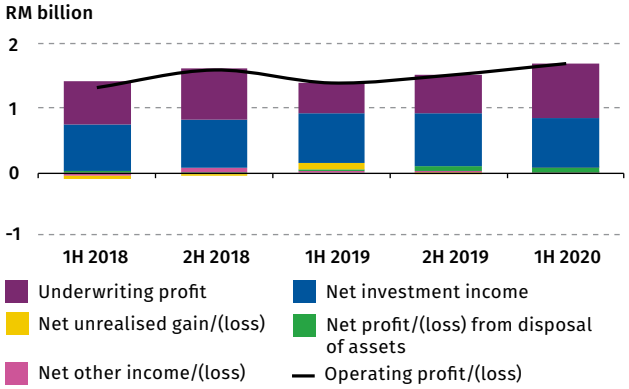


Chart 2.22: General Insurance and Takaful Sector – Gross Direct Premium Growth and Product Composition

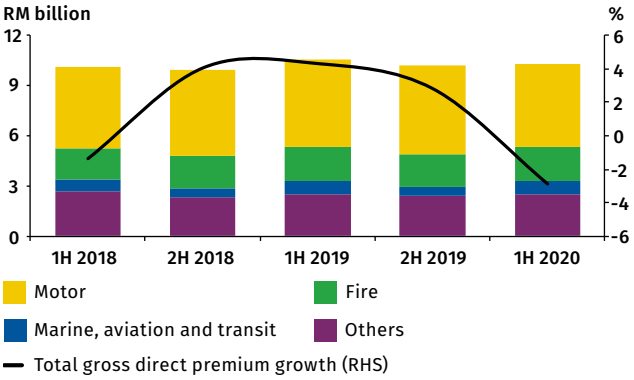
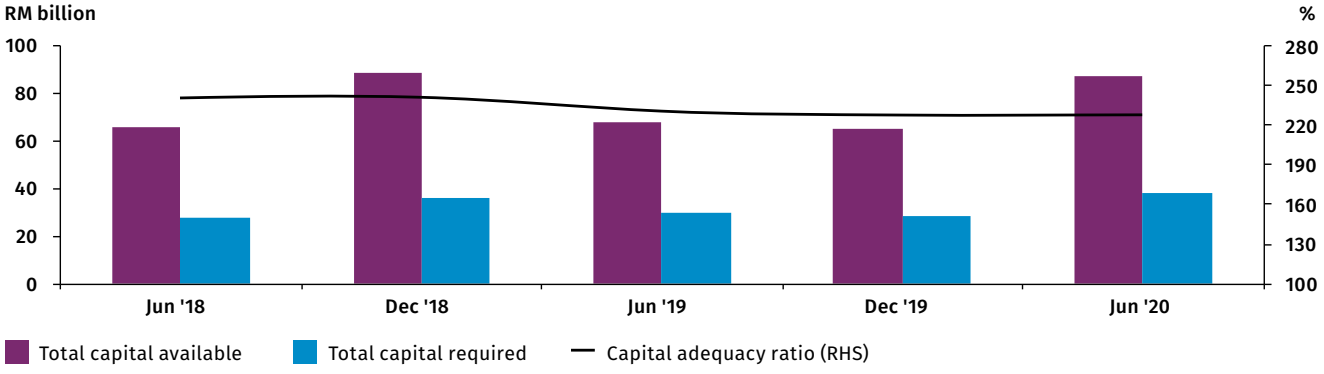


Chart 2.23: Insurance and Takaful Sector – Capital Adequacy Ratio



[1] Excess of net premium after deducting benefit payouts, agency remuneration and management expenses

Source: Bank Negara Malaysia

ASSESSING THE RESILIENCE OF FINANCIAL INSTITUTIONS

Stress testing is an integral component of the Bank's financial stability framework, used to assess and manage risks to financial stability. The Bank's annual stress tests adopt both a top-down and bottom-up approach[12] to stress testing to detect and assess vulnerabilities in individual financial institutions and the broader financial system. Typically, the stress tests are designed to capture adverse scenarios that incorporate extreme shocks that are plausible but have a low probability of occurring. This allows the Bank to assess the ability of financial institutions to withstand large shocks, and determine how this interacts with, and could affect, the broader financial system.

The initial economic disruptions from COVID-19 were more severe than that assumed in the Bank's macro stress test released earlier this year. However, with the gradual improvement in economic activities since May, the overall impact on financial institutions is now expected to fall within the range of outcomes anticipated under the adverse scenarios in the earlier stress test. Given that the current environment already reflects stressed conditions, applying further shocks to these adverse scenarios would not provide useful information to assess the resilience and capacity of the banking system to support the economy at the present time.

Therefore, the Bank's latest macro stress test examines the potential losses to the banking system from the assumed impact of a recovery path that is derived with reference to the Bank's updated macroeconomic outlook.[13] Under this scenario, growth is assumed to have troughed in 2Q 2020. With the re-opening of the economy in early May, the economy is then assumed to gradually recover in the latter half of 2020 and register a rebound in 2021 amid global growth recovery and aided by the series of stimulus and financial relief measures introduced by the Government and the Bank. While the scenario does not specifically consider the reintroduction of a nationwide lockdown, it should, however, be noted that modelled impacts from the economic variables applied (such as the impact on household and business defaults and the corresponding credit costs) have retained some degree of conservatism (further elaborated in the information boxes below). This is consistent with the aim of assessing if banks can withstand stress conditions that are not only more plausible, but also potentially even more severe.

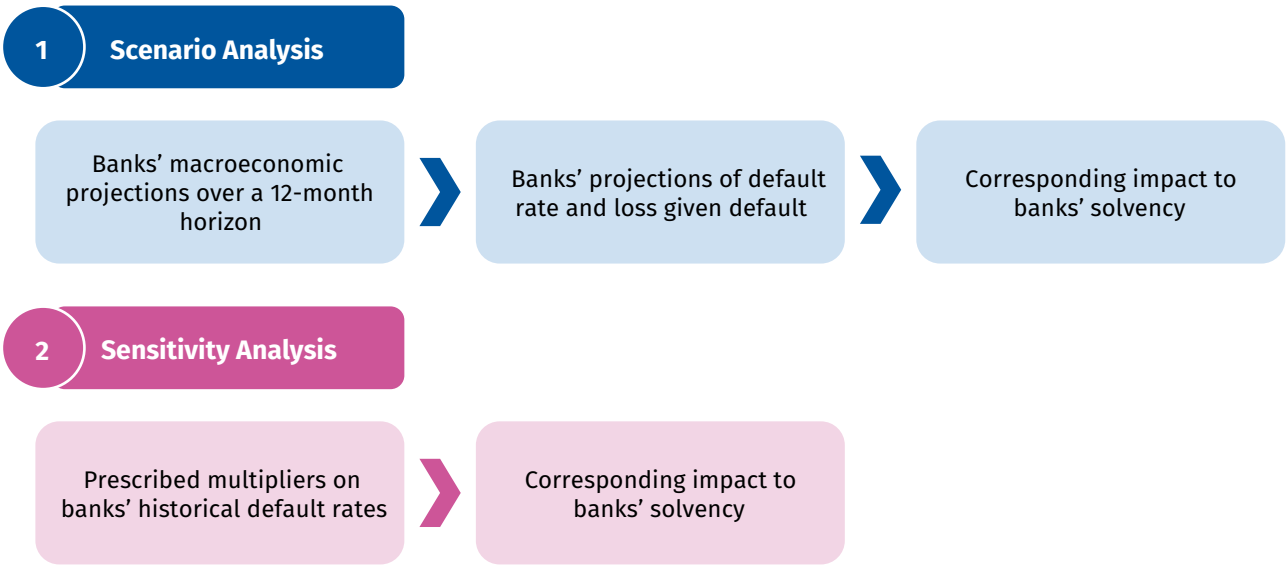
A bottom-up approach was also used to provide an additional perspective on individual banks' resilience. This built on banks' own updated internal stress tests[14] and historical default experience. The internal stress tests were further subjected to a sensitivity analysis conducted on the credit loss estimates projected by individual banks based on factors prescribed by the Bank (Diagram 2.1).

[12] For details of the Bank's approach to stress testing, refer to the box article 'Macroprudential and Microprudential Applications of Stress Testing in Malaysia' in the BNM Financial Stability and Payment Systems Report 2012.

[13] For details of the Bank's macroeconomic outlook, refer to the BNM Quarterly Bulletin 2Q 2020.

[14] Used by banks to inform the setting of internal capital targets as part of the Internal Capital Adequacy Assessment Process (ICAAP).

Diagram 2.1: Overview of the Bottom-up Stress Test Exercise

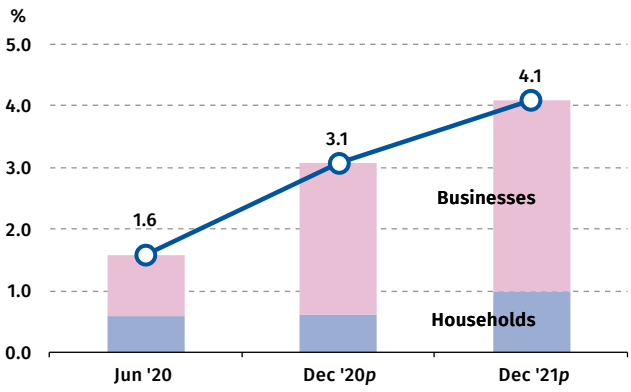


Source: Bank Negara Malaysia

Results from the Bank's stress tests affirm the resilience of banks to an expected increase in credit losses under more adverse economic conditions

Under the assumed scenario of economic and financial shocks arising from the pandemic, overall impairments are projected to rise above 4% of loans by end-2021, mainly driven by higher business impairments (Chart 2.24). This takes into account the effects of the blanket moratorium implemented in April and subsequent targeted repayment assistance for individuals that was announced by banks in August. Business impairments are expected to be driven by defaults of maturing bullet repayments of firms operating in vulnerable sectors, mostly in the services industry which is expected to experience a slower recovery, as well as exposures to several large borrower groups with weaker financials (Diagram 2.2).[15] Meanwhile, household loan impairments are projected to double,[16] albeit from historically low levels. Higher household impairments[17] are expected to emerge in the second half of 2021 given the extended repayment assistance programmes that will remain in place through 1Q 2021 for individuals who have experienced a loss in income (Diagram 2.3).

Chart 2.24: Macro Simulation: Banking System – Impaired Loans Ratio



p: projected

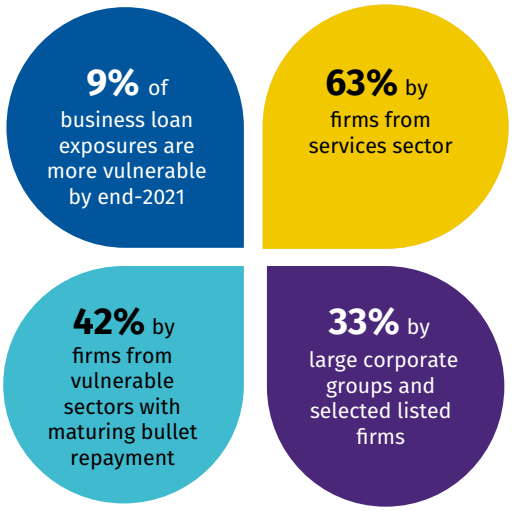
Source: Bank Negara Malaysia

[15] For details of the estimation methodology, refer to the Information Box 'Forecasting Business Impairments: Two-pronged Approach'.

[16] With no assistance measures, some countries have experienced up to a quadrupling level of impairments during a crisis. ECB (2013) "What Matters in Addition to the Economic Cycle?" and IMF (2019) "The Dynamics of Non-Performing Loans During Bank Crises".

[17] For details of the estimation methodology, refer to the Information Box 'Forecasting Households' Time to Default – Enhancements to the Financial Margin Framework'.

Diagram 2.2: Macro Simulation: Business Sector – Impairment Profile

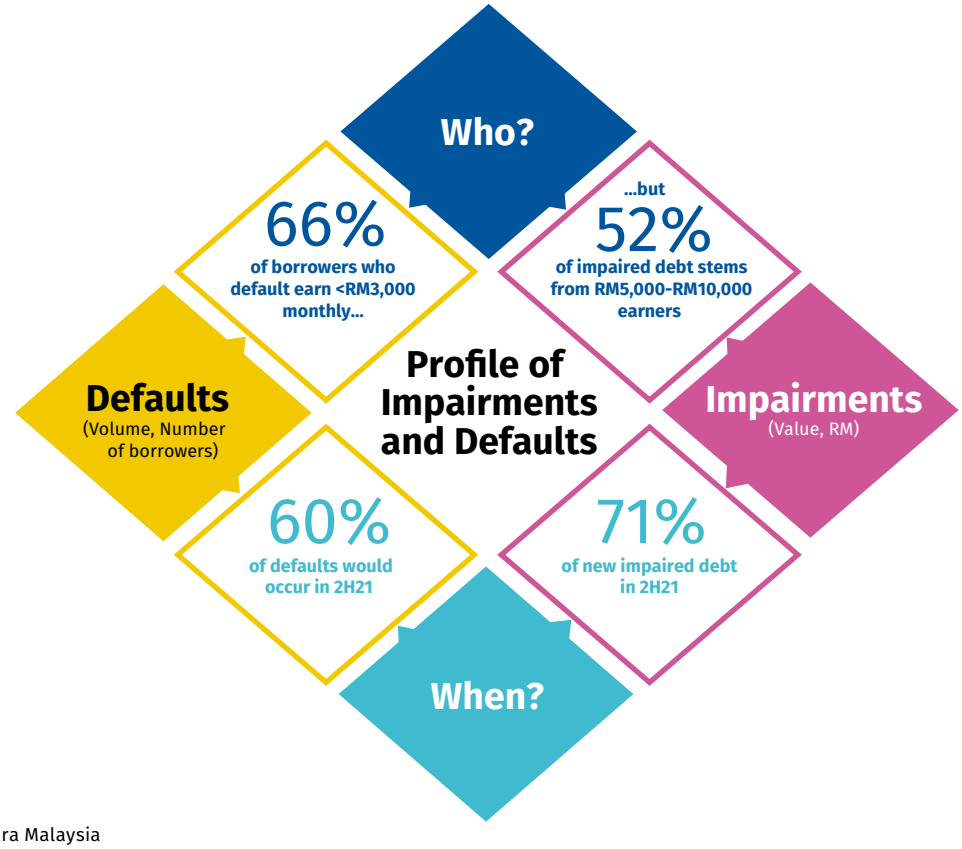


Source: Bank Negara Malaysia

Overall, credit costs to banks could rise to RM29 billion (1.4% of total loans) over 2020 and 2021 (Diagram 2.4). These projections assume conservative estimates of the share of loans under bespoke targeted repayment assistance (mainly for businesses) based on restructuring and rescheduling (R&R) trends observed at the onset of the pandemic.[18] With uncertain conditions persisting, banks have been much more proactive in extending repayment assistance, as seen in recent months. This was not taken into account in the simulations. Since July, the number of businesses receiving repayment assistance from banks has increased seven-fold. This would improve debt serviceability and mitigate credit losses.

In anticipation of higher credit losses, banks have been shoring up their buffers, adding RM2.7 billion to provisions in 1H 2020. At an individual bank level, additional provisions by banks have already risen to an average of 16% of banks' projected stressed credit

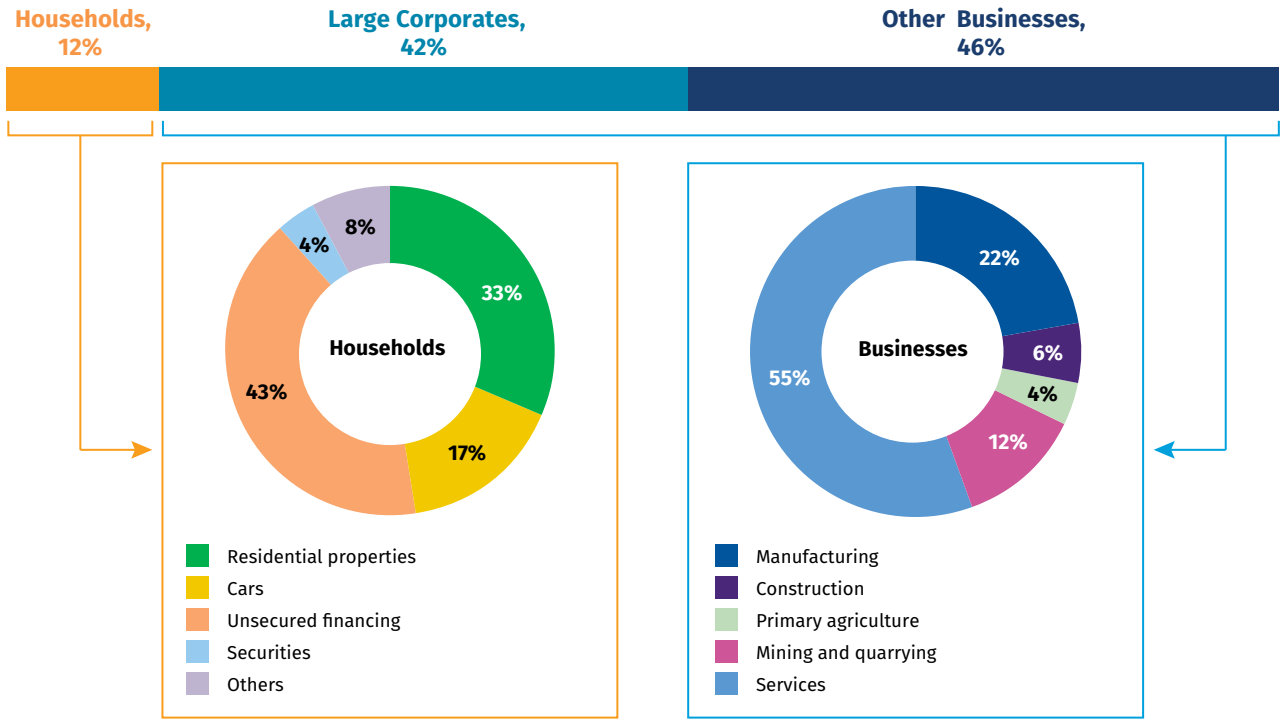
Diagram 2.3: Macro Simulation: Household Sector – Impairment Profile



Source: Bank Negara Malaysia

[18] The R&R rates used are computed by banks and sectors, based on data submission from banks from April to June 2020. During this period, R&R activity was mainly for non-SMEs as SMEs were covered under the automatic loan moratorium.

Diagram 2.4: Macro Simulation: Banking System – Drivers of Projected Credit Losses in 2020 and 2021



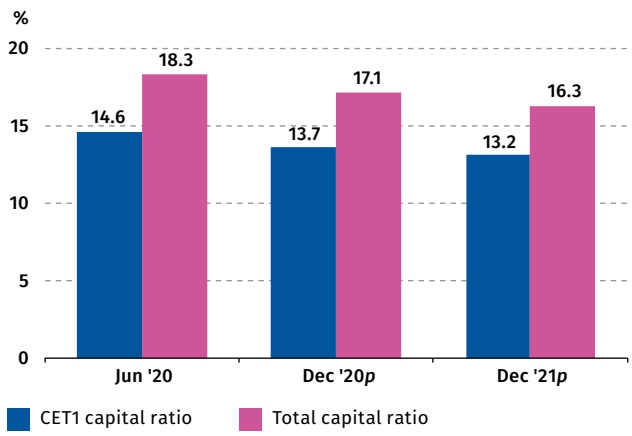
Source: Bank Negara Malaysia

losses over a 12-month horizon based on their internal stress tests. Provisions could increase further as banks obtain greater visibility on credit developments based on more informed assessments of borrowers after the end of the blanket moratorium. The gradual build-up of provisions will also ensure that banks maintain healthy buffers to absorb losses and support continued lending to the economy.

The impact of stressed credit losses on banks' solvency would result in the aggregate total capital ratio (TCR) and CET1 capital ratio declining by 2 percentage points (ppts) and 1.4 ppts, respectively, over the next 12-18 months (Chart 2.25).

Under the bottom-up scenario analysis, the aggregate TCR and CET1 capital ratio as reported by commercial and Islamic banks are projected to decline by a larger extent of 3.4 ppts and 3.1 ppts, respectively, from initial positions. Applying a sensitivity analysis to these results, individual banks are projected to have adequate buffers above the regulatory minimum capital requirement to withstand further losses associated with default rates that are 8 times higher than the banks' historical default rates. These multiples are significantly more severe than Malaysia's historical worst experience in the Asian Financial Crisis, during which overall impairments rose by 3-5 times from initial levels. The drivers of credit losses were observed to be broadly similar under both the macro simulation and the bottom-up analysis, further affirming that the financial system has adequate buffers to withstand extreme stresses that are more severe than the historical worst experienced to date.

Chart 2.25: Macro Simulation: Banking System – Capital Ratios



p: projected

Source: Bank Negara Malaysia

Actual impact on banks' capital strength over the next 12-18 months will be subject to some degree of uncertainty

While the stress tests presented here capture plausibly adverse scenarios with some degree of conservatism, the actual impact of the pandemic on banks' solvency over the next 12-18 months will depend on multiple factors, including:

- **The pace and strength of the domestic economic recovery**, which in turn is contingent upon how the pandemic continues to evolve, labour market conditions and business and consumer behaviour in the new normal;
- **The pace of economic recovery within the region**, which could affect the asset quality and profitability of overseas operations of domestic banking groups;
- **Initiatives taken by financial institutions** to support viable borrowers, which could improve debt servicing capacity and reduce potential impairments;
- **Bank management actions** to shore up buffers such as new capital issuances or capital injections from parent bank(s); and
- **Additional policy intervention** by the Bank, Government and/or other authorities to support economic recovery.

While banks can be expected to be more cautious given continued uncertainties and prospects of a more protracted recovery, it is in the collective interest of the banking industry to continue supporting viable businesses and households throughout this period. Capital buffers built up over the years are intended to support lending during times of stress and therefore can be used. Further, such buffers are vital for banks to remain resilient and reduce risk aversion. This will be critical to avert larger repercussions on economic growth and recovery prospects, which in turn will inflict much higher losses on banks.

Key Features of the Enhanced Macro Solvency Simulation for Banks

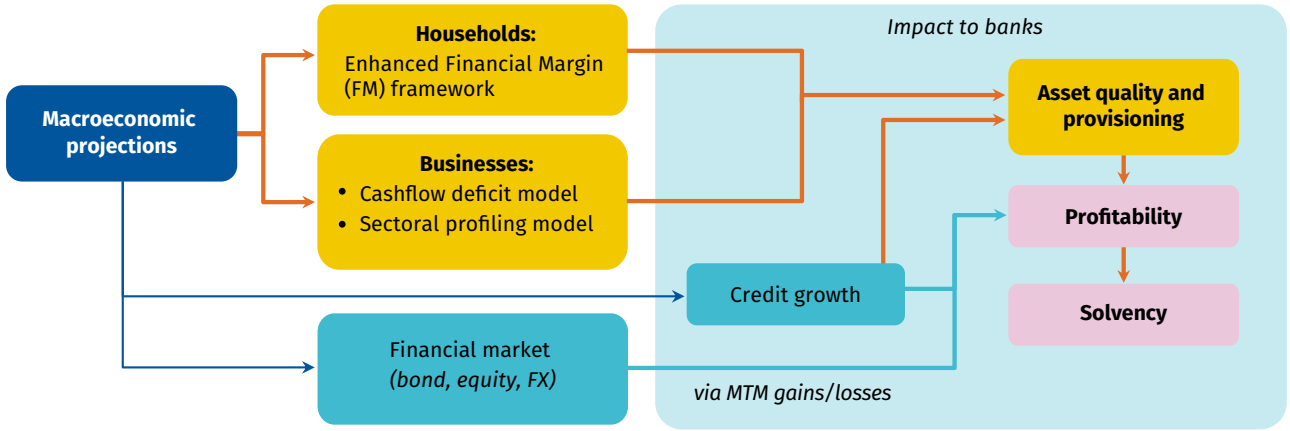
The scenario and assumptions used in the macro solvency simulation encompass a quarterly time horizon, with forward-looking projections up to end-2021. This aims to capture the effects of macroeconomic and financial shocks that could be transmitted much faster during a crisis, thus enabling the identification of emerging pockets of risk in interim periods.

Accordingly, the models and assumptions underpinning the macro simulation have been refined to improve the Bank's estimations and vulnerability assessments (Diagram 2.5 and Table 2.2):

- Enhanced versions of existing macro credit risk models for household and business borrowers were used to assess the impact of weaker macroeconomic conditions on credit risk arising from loan migrations and higher impairments.
- To estimate the impact on provisioning from the deterioration in asset quality, the simulation drew upon existing institution-specific loan loss coverage ratios[19] for different loan purposes and stages of loan performance based on loan classification under MFRS 9. This aims to better represent banks' actual credit risk models (Diagram 2.6).
- Remaining parts of banks' income and expenses also takes into account the impact arising from financial market volatility, slower credit growth in 2020, modification losses and lower interest rates.

[19] Coverage ratios are defined as the ratio of provisions to loans of that stage defined under MFRS 9. For example, Stage 3 coverage ratio is the ratio of Stage 3 provisions to Stage 3 loans.

Diagram 2.5: Schematic of Macro Simulation Framework



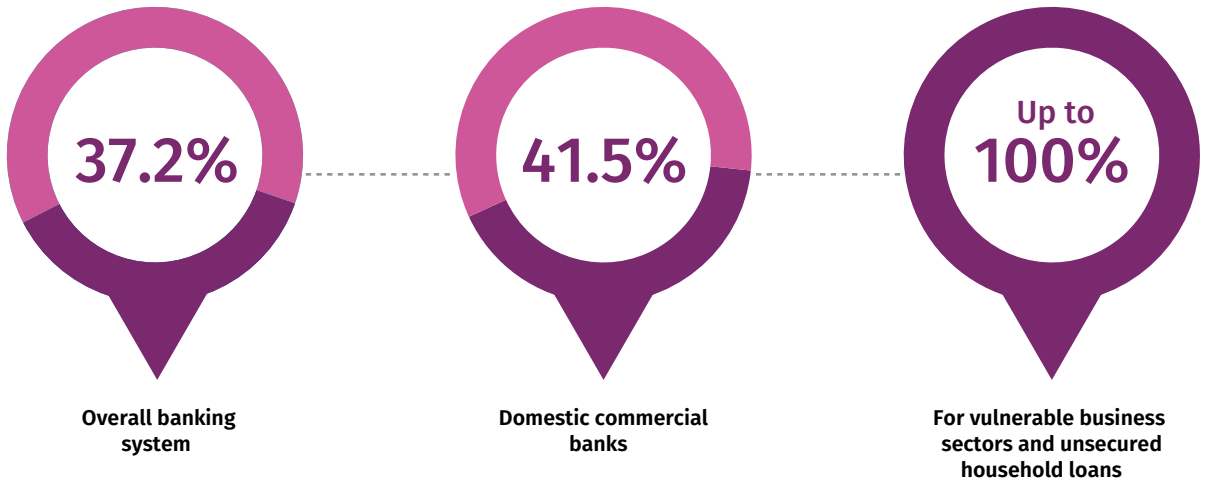
Source: Bank Negara Malaysia

Table 2.2: Key Assumptions

Section	Key Assumptions
Credit risk models	• Loan migration across stages under MFRS 9 are estimated using macro models linking macroeconomic conditions to borrowers' debt servicing capacity • New loans approved and disbursed during the simulation horizon are assumed to remain performing
Credit cost	• Coverage ratios are derived for each individual bank, by (i) stages under MFRS 9, and (ii) loan sector/purpose, and adjusted upwards to account for additional provisions made due to management overlays • Banks are assumed to maintain coverage ratios throughout the simulation horizon
Net interest income	• Estimations incorporate the impact from lower interest rates (OPR declined by 125 bps year-to-date), slower loan growth and modification losses
Non-interest income	• Credit-related fee and commission income projected to grow in line with credit growth • Cost-to-income ratios are assumed to remain stable throughout the simulation horizon, i.e. operating costs to move in tandem with income
Capital	• Profits are recognised on a half-yearly basis. Dividend payment is assumed to be at 50% of half-year profits

Source: Bank Negara Malaysia

Diagram 2.6: Selected Stage 3 Coverage Ratios



Source: Bank Negara Malaysia

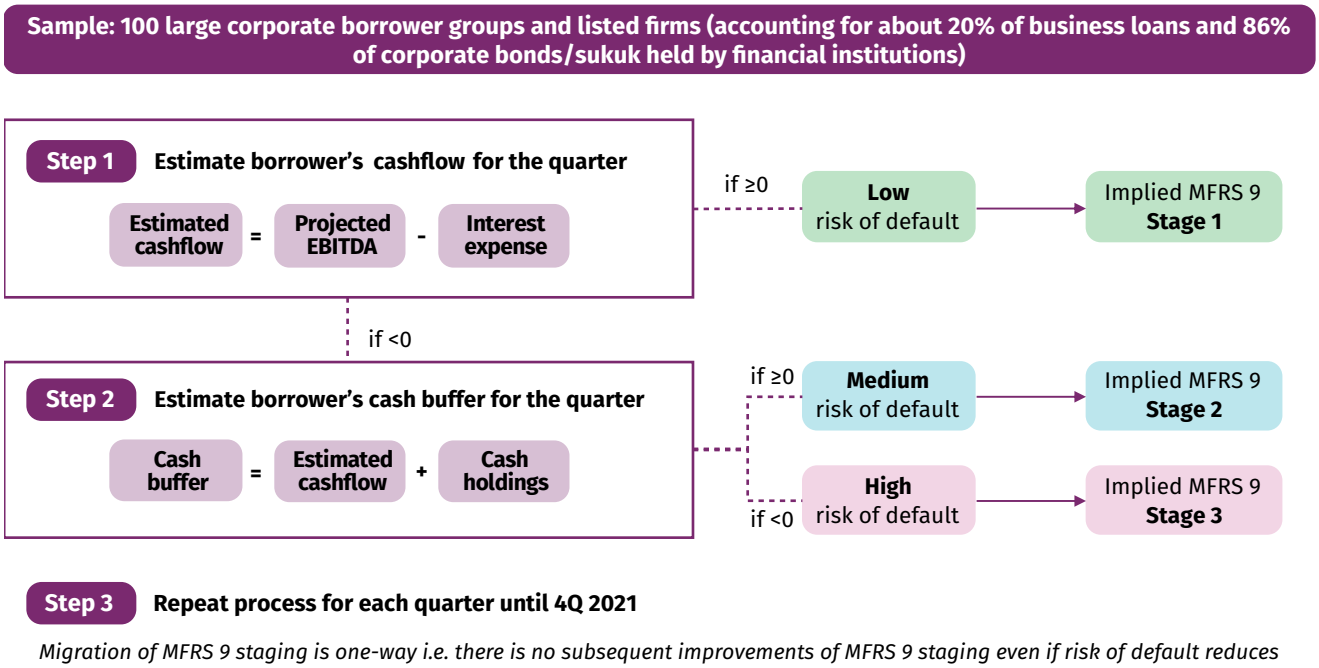
Forecasting Business Impairments: Two-pronged Approach

To simulate the potential trajectory of business sector impairments in the banking system for the macro simulation exercise, the Bank used two approaches, a cashflow deficit model for a sample of firms[20] with more accessible financial data and a sectoral profiling model for the remaining business exposures. This assessment also accounts for the risk profile of borrowers or borrower segments, repayment assistance extended by individual banks (based on experience during the early stages of the pandemic), and the effect of explicit government guarantees in mitigating losses.

(A) Cashflow Deficit Model

The cashflow deficit model determines a firm's risk of default by estimating whether it has sufficient earnings or cash buffers to repay its interest obligations (Diagram 2.7). Quarterly earnings[21] of a firm are projected up to end-2021 based on relationships established between sectoral GDP projections and firm-level financial data. These earnings are assumed to be used to service quarterly interest obligations during the period. In quarters where earnings are insufficient, the model assesses whether firms have sufficient cash buffers to draw on to honour interest obligations. Firms with sufficient earnings to service interest obligations are classified as "low risk of default" (MFRS 9 Stage 1), while firms that have to dip into their cash buffers are classified as "medium risk of default" (MFRS 9 Stage 2). This adds some degree of conservatism given that in practice, banks may continue to classify such exposures under Stage 1 if the borrowers have continued to service interest and coupon payments and there are no other evidence of a significant increase in credit risk. Finally, firms that have insufficient earnings and cash buffers are classified as high risk of default (MFRS 9 Stage 3). Stage 3 firms are assumed to default on all their exposures with financial institutions. Another layer of conservatism is applied to the model by assuming no reversion in the staging of firms, even if improvements in a firm's earnings or cash buffers were observed in subsequent periods after it defaults.

Diagram 2.7: Cashflow Deficit Model



Source: Bank Negara Malaysia

[20] 100 large non-financial corporate borrower groups and listed firms. Large non-financial corporate borrower groups represent corporations with aggregate credit exposures (include direct financing and holdings of corporate bonds and sukuk) exceeding RM1 billion with Malaysian financial institutions.

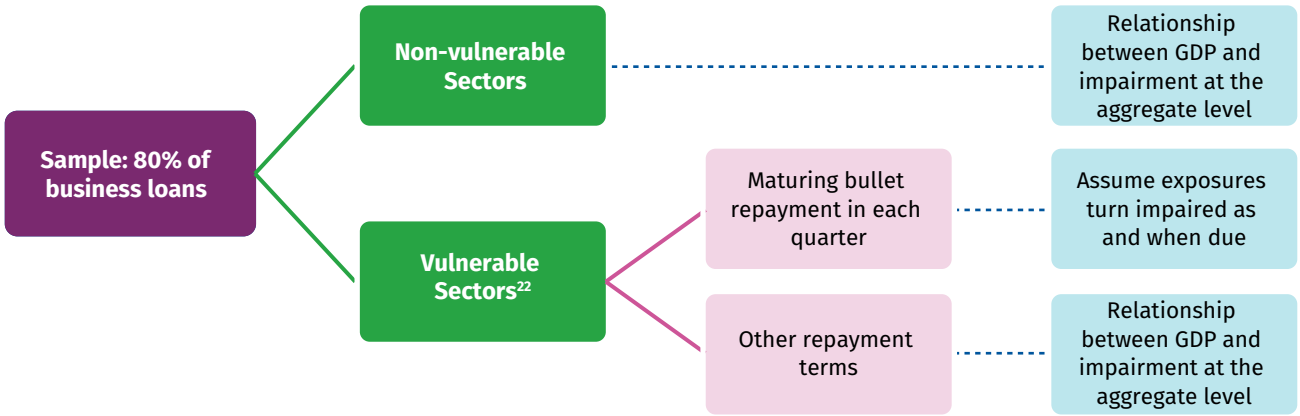
[21] As measured by earnings before interest, tax, depreciation and amortisation (EBITDA).

(B) Sectoral Profiling Model

For businesses where firm-level financial data are not readily available, the sectoral profiling model is employed (Diagram 2.8). This model is premised on three key assumptions: (i) financing exposures of firms in the vulnerable sectors[22] with bullet repayment terms will default[23] as and when they become due given the larger and immediate repayment obligations; (ii) impairments of other business exposures up to end-2021 are derived based on an established historical relationship between the annual growth of real GDP and business impairments at the aggregate level; and (iii) no SMEs are assumed to default before the end of the third quarter of 2020 due to the blanket loan moratorium in place between April and September 2020.

Reflecting a conservative approach taken in the estimations of business impairments, the model does not account for the effects of risk mitigants that could moderate the timing and magnitude of business impairments. These include (i) diversified revenue streams and available collateral for some of the larger borrowers; (ii) explicit credit guarantees by agencies such as Credit Guarantee Corporation Malaysia Berhad (CGC) and Syarikat Jaminan Pembiayaan Perniagaan Berhad (SJPP); and (iii) coordinated efforts by financial institutions, the Small Debt Resolution Scheme (SDRS) and the Corporate Debt Restructuring Committee (CDRC) to assist viable borrowers in restructuring and rescheduling loans.

Diagram 2.8: Sectoral Profiling Model



Source: Bank Negara Malaysia

[22] Sectors that are deemed more vulnerable are those more exposed to the COVID-19 pandemic and those impacted by supply chain disruptions. These include the agriculture, mining & quarrying, manufacturing, construction, wholesale and retail trade, hotels and restaurants, transport and storage, and real estate sectors.

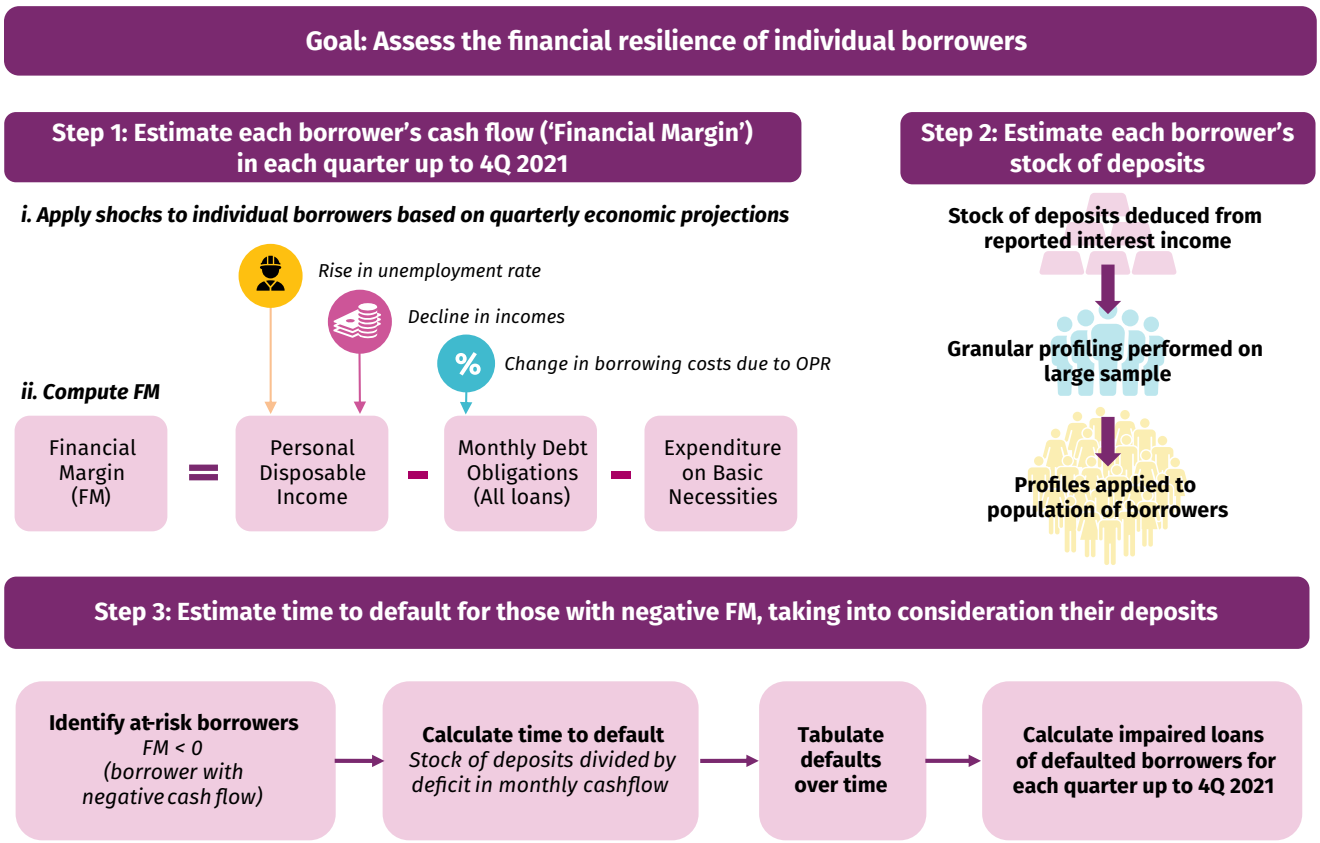
[23] Revolving credits are excluded as experience indicates that these exposures are typically rolled over.

Forecasting Households' Time to Default – Enhancements to the Financial Margin Framework

The financial margin framework is used in the Bank's in-depth assessments of households' financial health and resilience against hypothetical shocks, building off a rich set of individual borrower-level data. Previously, the framework ignores cumulative financial buffers that may be available to borrowers to meet shortfalls in monthly cashflows that are required to service debt and pay for essential expenditures. Borrowers are therefore presumed to default immediately when monthly cashflows are in deficit (i.e. negative financial margin), after accounting only for any positive cashflows from the previous month. This builds in a level of conservatism during normal times in order to capture tail-risks.

In the current environment, the Bank sought to further examine the ability of households to service their debt where more households may experience financial difficulties, but would be able to draw on financial buffers they have accumulated to sustain their debt repayments for a period of time. To this end, the financial margin framework was enhanced (Diagram 2.9) to account for the progressive draw down on deposits by households to meet shortfalls in monthly cashflows. Households are presumed to default only after their stock of deposits is depleted. The enhanced framework thus provides additional insights from a time dimension on the evolution of household default risk arising from income and unemployment shocks.

Diagram 2.9: Outline of the Enhanced Financial Margin Framework



Source: Bank Negara Malaysia

This framework only considers deposits as wealth. This is given the high uncertainty in estimating other forms of wealth[24] at an individual-level, and the easy accessibility to deposits in times of financial stress. A large sample of anonymised individual tax records and techniques[25] to measure wealth distribution was employed to estimate the stock of deposits held by individual borrowers.

Unlike the previous sensitivity analyses where one-off shocks were simulated, the enhanced framework simulates quarterly shocks. It also incorporates the effects of the automatic loan moratorium between April and September 2020 and the targeted assistance measures announced in July 2020.[26] During the automatic loan moratorium period, borrowers' debt obligations are set to zero. Subsequently, borrowers affected by simulated unemployment shocks are assumed to continue with zero debt obligations until end-2020, whereas all other borrowers' debt obligations are scaled by the quantum of income shocks simulated until the end of the targeted assistance period. With the gradual recovery in labour market conditions, the targeted assistance measures will continue to provide a measure of debt relief to borrowers who remain affected by the crisis. These measures are assumed to lapse after 1Q 2021. The enhanced financial margin framework does not include the impact of additional initiatives beyond the targeted assistance measures announced, such as banks' bespoke R&R efforts or programmes by the Credit Counselling and Debt Management Agency (Agensi Kaunseling dan Pengurusan Kredit, AKPK). Such additional support extended would further contain a rise in distress among households.

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[24] Other forms of liquid financial assets include investment in equities and unit trust funds (fixed and non-fixed price). Valuations for some of these assets tend to be volatile, further complicating their measurement, and hence the deliberate omission from the computation.
[25] Saez and Zucman (2014), 'Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data'.
[26] These measures include (i) an extended loan moratorium for unemployed borrowers in 4Q 2020 and (ii) a reduction in debt obligations proportionate to income declines over the period 4Q 2020 – 1Q 2021.