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.

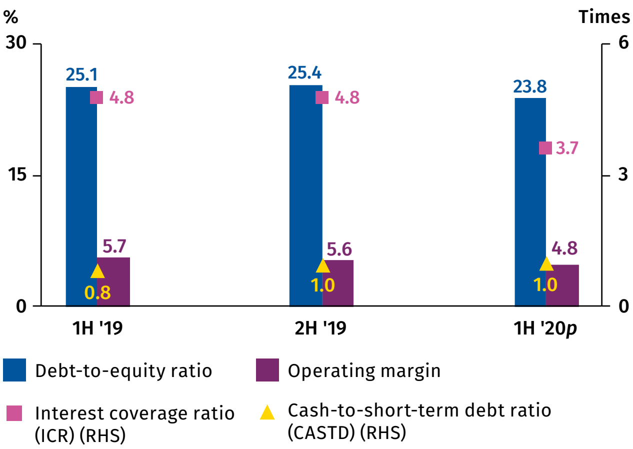
[3] Including airlines, land transport, hotels and restaurants, entertainment and theme parks, medical tourism, travel agents, and retail services.
[4] As measured by the median interest coverage ratio (ICR).
[5] Prudent threshold for ICR is two times.
[6] As measured by the median cash-to-short-term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

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

[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

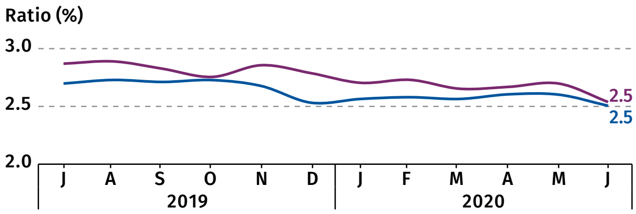
Source: Bank Negara Malaysia, S&P Capital IQ and Bank Negara Malaysia estimates

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



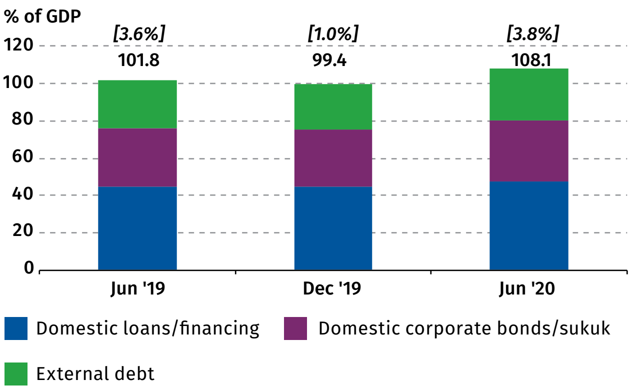
— Overall business: Gross impaired loans

— 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

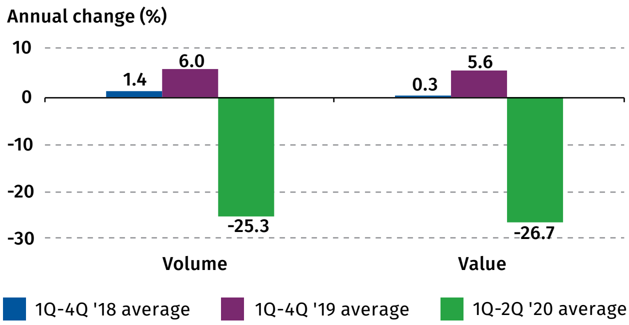


Chart 1.10: Property Market – Occupancy Rate for Hotels and Vacancy Rates for Office and Retail Space

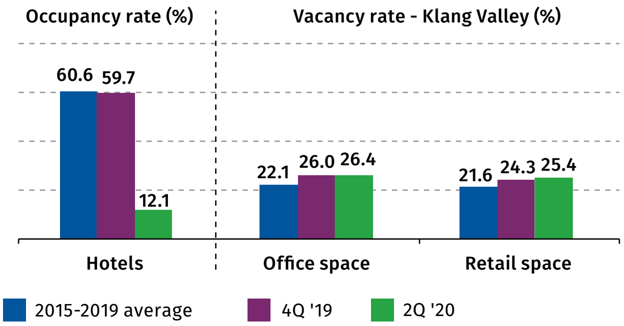


Chart 1.11: Property Market – Rentals for Prime Office and Retail Space in Kuala Lumpur

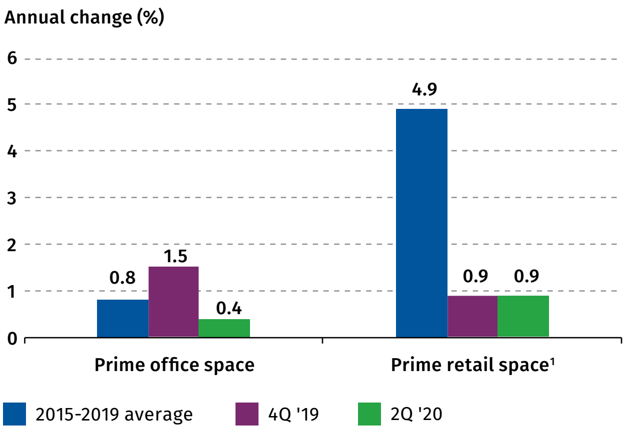


Chart 1.12: Property Market – Financial Institutions' Exposures to the Property Market

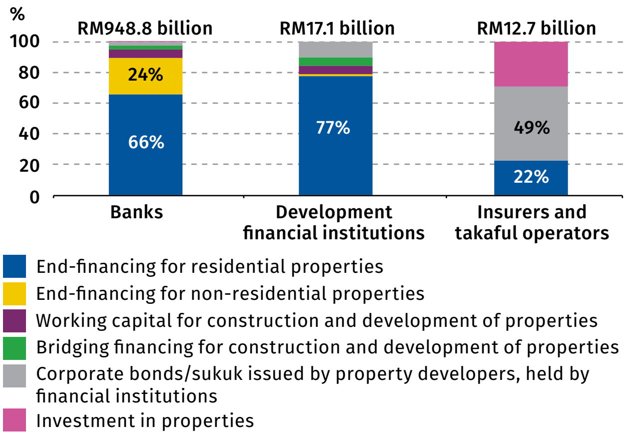


Chart 1.13: Property Market – Loan Impairment Ratios for End-Financing by Segment

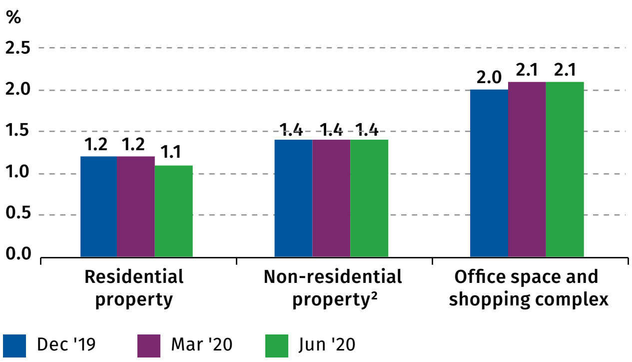
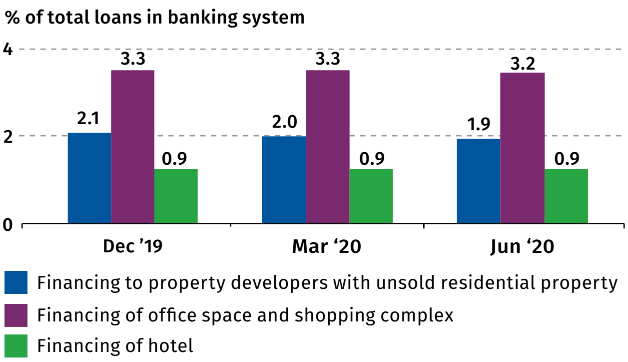


Chart 1.14: Property Market – Banking System's Exposure to Vulnerable Segments in the Property Market



[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

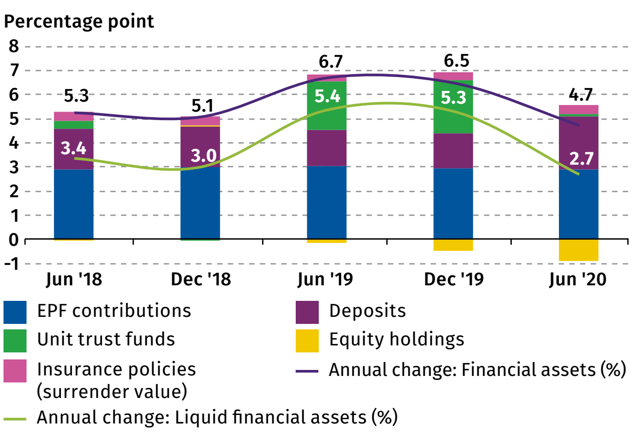
Households were partially cushioned by the relief measures from the adverse impact of the pandemic

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).

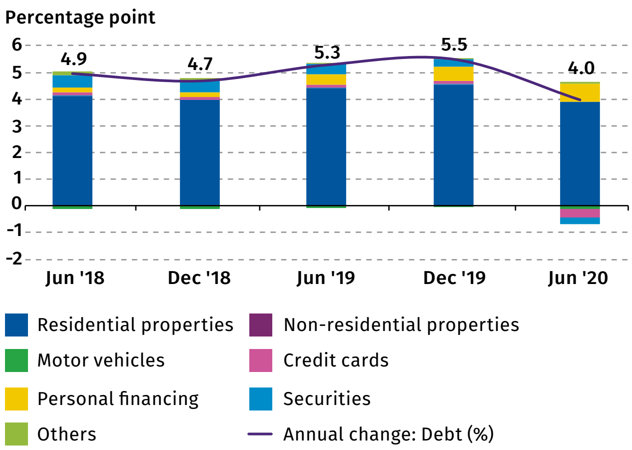
Some households, however, are facing increased financial stress. Household leverage[18] increased the most among borrowers earning less than RM5,000 per month in 1H 2020, amid income prospects

Chart 1.15: Household Sector – Annual Growth of Financial Assets



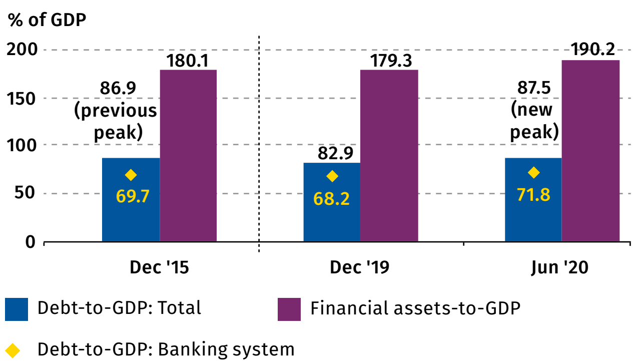
Source: Bank Negara Malaysia, Bursa Malaysia, Employees Provident Fund, Securities Commission Malaysia

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

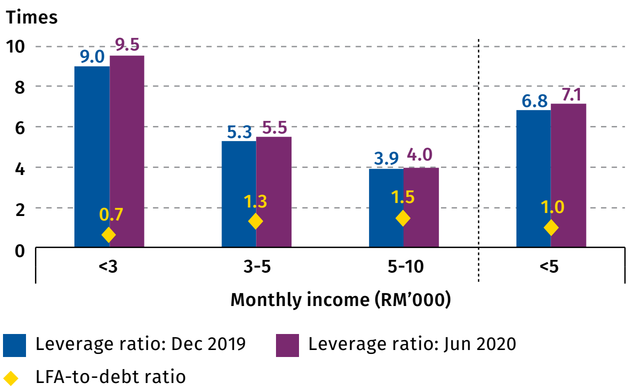
[16] As to date, total cash disbursements under *Bantuan Prihatin Nasional* (BPN) was RM11.2 billion involving 10.6 million recipients. Total cumulative withdrawals under i-Lestari from April to September amounted to RM9.33 billion, with 4.64 million applications approved.

[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

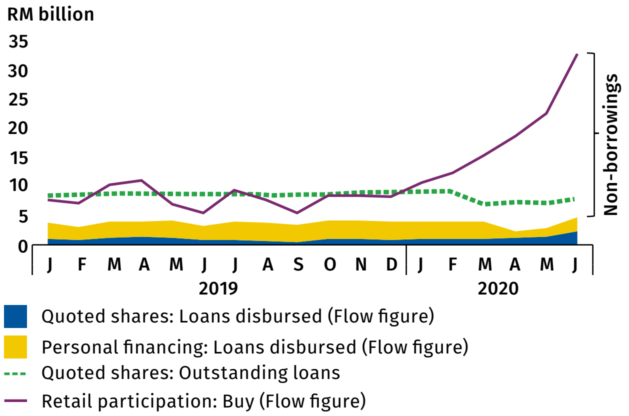
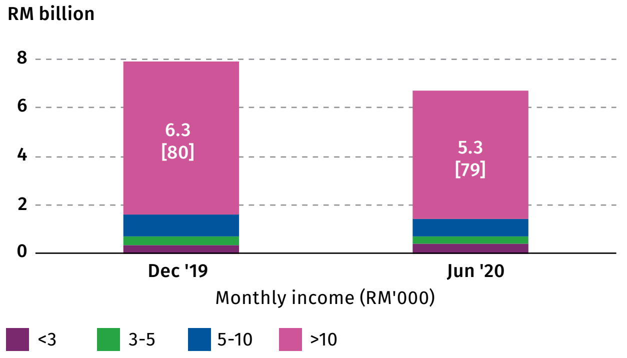


Chart 1.20: Household Sector - Outstanding Loans for Purchase of Quoted Shares by Income Group



[ ] 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

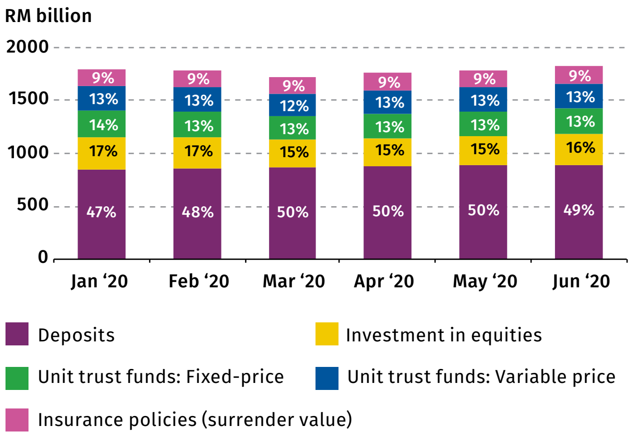
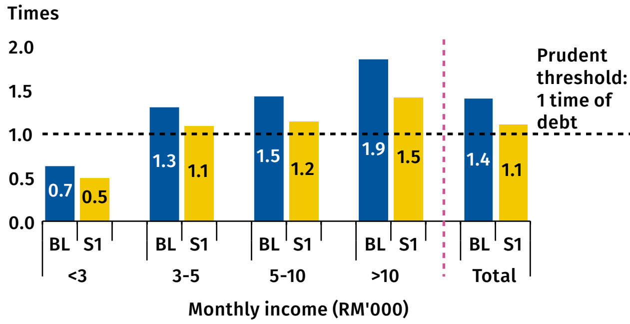


Chart 1.22: Pre- and Post-shock Scenarios – LFA Cover by Income Group



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.

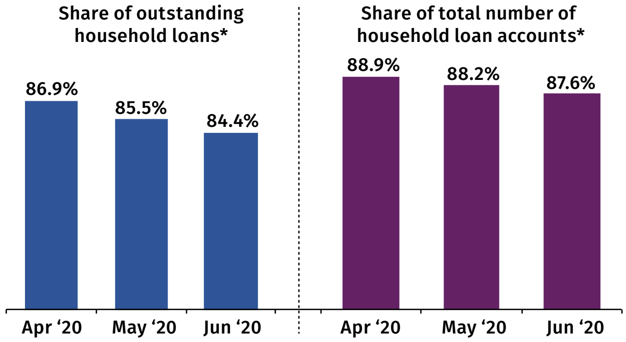
positive equity[22] are less likely to default on their housing loans. For households with lower income and financial buffers, income support measures will remain important to avoid further financial hardship.

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

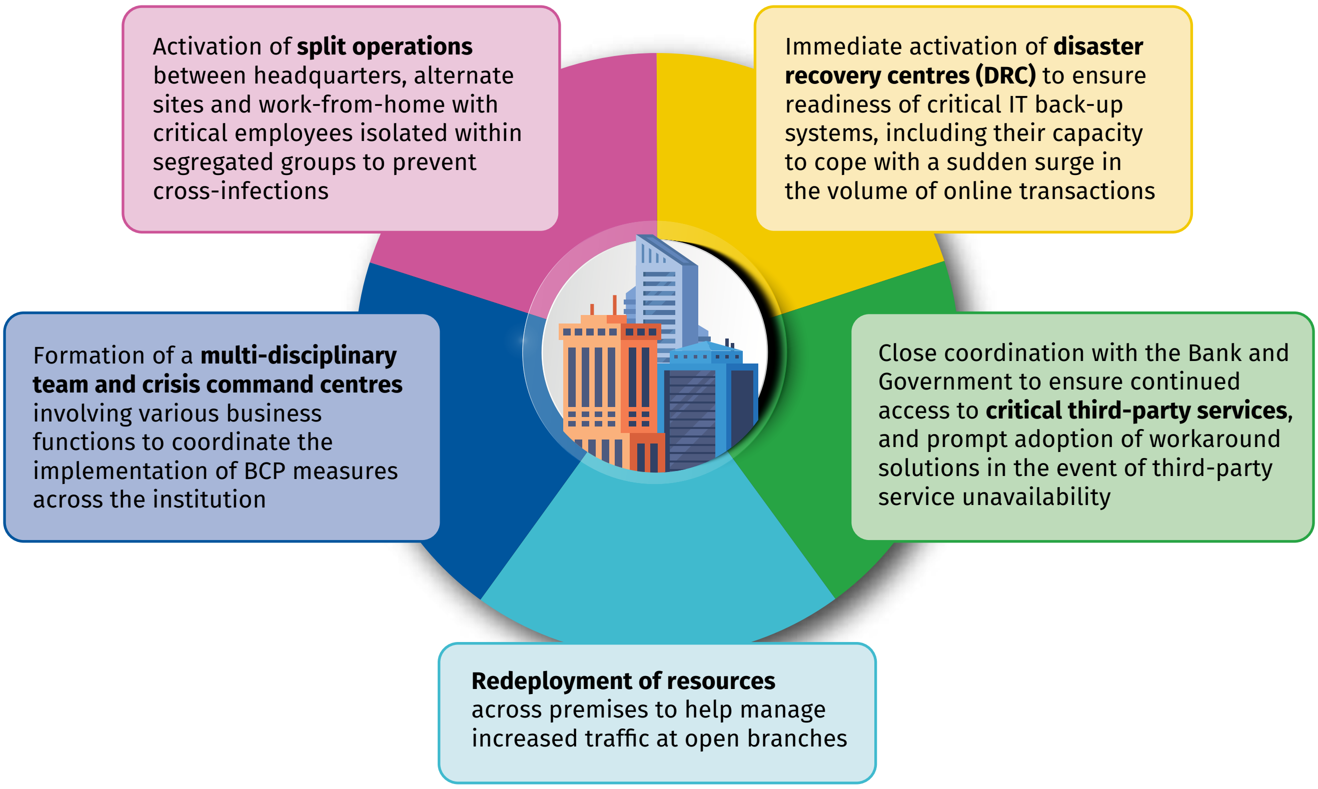
There were no operational disruptions despite heightened operational risks during the pandemic, and financial institutions are taking further steps to strengthen business continuity plans

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.