

Coping with an Uneven Recovery: Key Developments in the First Half of 2021

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MARKET RISK

Domestic financial market conditions remained orderly

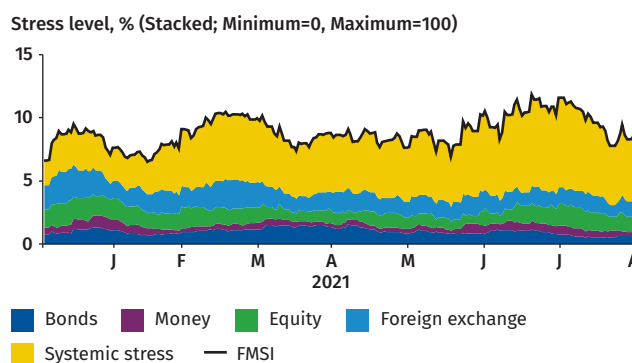
In the first half of 2021, global financial markets were lifted by the stronger-than-expected economic recovery, particularly in advanced economies where an acceleration in vaccine deployment has led to the easing of pandemic restrictions. Nevertheless, the global economic rebound remained uneven as a resurgence of COVID-19 infections and lagging vaccine rollouts weighed on the recovery in many emerging markets. On the domestic front, market stress increased in mid-June and July (Chart 1.1) amid rising global bond yields, more restrictive containment measures in response to an escalation in COVID-19 cases as well as domestic political developments, before easing slightly in August. Stress levels, nevertheless, remained well below those observed at the onset of the COVID-19 pandemic between March and April 2020.

The domestic equity market saw non-resident outflows amounting to RM4.5 billion for the eight months up to end-August 2021 amid subdued investor sentiment (Chart 1.2). While lingering uncertainties surrounding the re-opening of the economy could trigger further outflows by non-residents in the period ahead, the continued presence of large domestic institutional and retail investors is expected to provide some support to equity prices. Notably, retail investors continued to purchase the bulk of the sell-offs in the equity market, accounting for 34% of the total value traded in August 2021 (2020: 34%; 3-year average: 19%).

Importantly, such investments have not been associated with higher leverage which could increase risks to households under more volatile market

conditions. Household loans to purchase quoted shares remained small at 0.5% of total banking system loans, consistent with the 5-year historical average, while loans to stockbroking and fund management firms also remained stable at less than 1% of total banking system loans. Retail investor activity¹ is expected to be sustained in the near term, as households, particularly those with higher

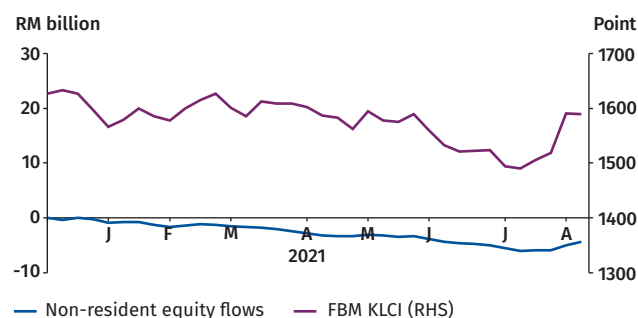
Chart 1.1: Financial Market – Financial Market Stress Index (FMSI)



Note: The FMSI reached a peak of 28.2% at the onset of the COVID-19 pandemic in March 2020

Source: Bloomberg, Reuters and Bank Negara Malaysia estimates

Chart 1.2: Financial Market – Cumulative Non-resident Equity Flows and Performance of the Domestic Equity Market



Source: Bloomberg

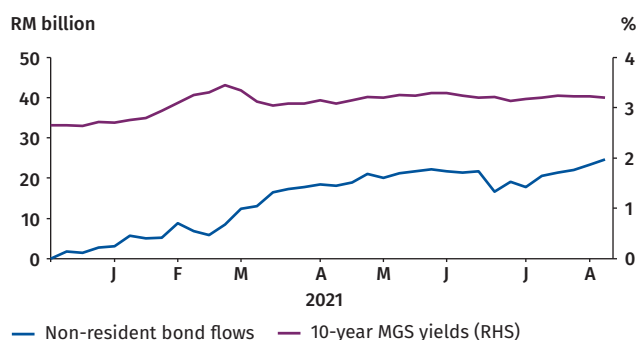
¹ Based on the CGS-CIMB 2021 Retail Investors' Sentiment Survey, the majority of retail investors in Malaysia were observed to be those earning monthly incomes of above RM5,000 with investments that are primarily funded by savings and income.

incomes, continue to seek higher returns amid the low interest rate environment. Although there has been evidence of some households using monies from deferred loan repayments to invest in the equity market, this is not prevalent and more likely to occur among higher-income households with greater financial flexibilities given the potential costs associated with deferring loan repayments. Market insights also suggest that these retail investors tend to be those with some experience in equity investments, seeking to increase longer-term returns on their savings. Collectively, these factors continue to limit any risks to financial stability from higher levels of retail investor activity seen in the more recent period. A prolonged period of low interest rates, however, could increase risks going forward by intensifying the search for yield among households that may be less capable of managing investment risks.

The domestic bond market remains attractive to non-resident investors

The domestic government bond market recorded larger net non-resident inflows in the first eight months of 2021 (RM23.9 billion) compared to the whole of 2020 (RM17.2 billion) (Chart 1.3). This followed the affirmation of Malaysia's sovereign rating of "A-" and "A3" by S&P Global Ratings and Moody's Investors Service, respectively, and Malaysia's retention in FTSE Russell's World Government Bond Index (WGBI). The share of non-resident holdings in the government bond market consequently increased to 25.2% as at August 2021 (December 2020: 24.2%; 5-year average: 25.9%). Demand for Malaysian Government Securities (MGS) is

Chart 1.3: Financial Market – Cumulative Non-resident Bond Flows and Performance of the Domestic Bond Market

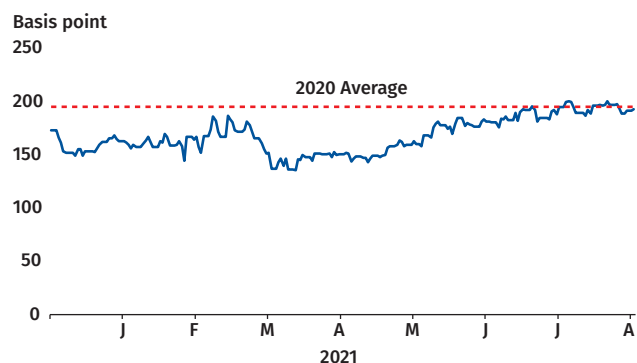


Source: Bank Negara Malaysia and Bloomberg

expected to remain supported by the attractive yield pick-up over US Treasuries (UST). On average, the 10-year MGS-UST yield differential stood at 169 basis points (bps) during the first eight months of 2021 (2020 average: 195 bps; 2019 average: 151 bps) (Chart 1.4). Longer-term bonds (10 years and longer) continued to command a healthy average bid-to-cover ratio of 2.6 times in the first eight months of 2021 (2020 average: 2.1 times). Meanwhile, domestic institutional investors continued to play an important role in supporting orderly conditions in the domestic bond market, with banks' holdings of government bonds increasing markedly during the period amid subdued loan growth. Domestic funding conditions also remained favourable for corporates. Gross corporate bond² issuances increased during the first seven months of 2021 (RM63.8 billion; January to July 2020: RM45.6 billion), with the credit spread for 10-year AAA-rated papers hovering around 63 bps on average between January and August 2021 (2020 average: 59 bps). More than half of these issuances were from the finance, insurance, real estate and business services sectors.

Looking ahead, domestic bond yields could see continued upward pressure from the higher incoming government bond supply and a further rise in UST yields from improvements in US economic prospects. This increases risks from mark-to-market losses and higher borrowing costs for financial institutions, businesses and the Government. Active risk management and hedging strategies of financial institutions are expected to contain any significant impact from heightened market volatility on the resilience of individual institutions. For banks, while the elevated domestic bond yields during the first half of 2021 led to revaluation losses from bond

Chart 1.4: Financial Market – 10-year MGS-UST Yield Differential



Source: Bloomberg

² Include banks and non-financial corporates, but exclude short-term papers in conventional and Islamic principles and issuances by Cagamas.

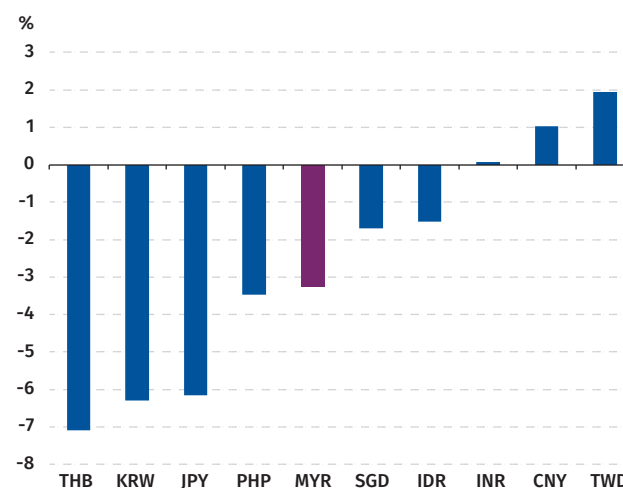
holdings in the banking book, the impact has been manageable at less than 1% of total risk-weighted assets. In addition, banks' costs of funds are not expected to be significantly affected by higher yields, given their low reliance on the bond market as a funding source.³ Based on a sensitivity analysis of banks' balance sheets to bond yield movements, an increase in bond yields of up to 89 bps⁴ and higher resultant funding costs⁵ could reduce banks' aggregate profits before tax and total capital ratio by up to 11% and 1 percentage point (ppt), respectively.

For insurers and takaful operators (ITOs), a similar shock could have a more significant impact with the profitability⁶ of life and family funds, and general funds declining by up to 85% and 29%, respectively. From a solvency standpoint, an increase in bond yields is expected to be positive for the life and family sector given correspondingly lower valuations of liabilities relative to assets,⁷ while the aggregate capital adequacy ratio of the general sector could decline by up to 11 ppts. Overall, the impact of rising bond yields on banks and ITOs' solvency positions is expected to remain limited with aggregate capital levels remaining comfortably above the regulatory minima.

Conditions in the Malaysian foreign exchange market were influenced by both external and domestic factors in the first eight months of 2021. In the first quarter of the year, the rise in long-term UST yields saw the rebalancing of portfolio investments towards US financial assets, which in turn led to a broad-based strengthening of the US dollar against most emerging market currencies. Investors were also more cautious in the second quarter as COVID-19 cases surged across several Asian economies, including Malaysia. Domestic risk factors also weighed on the ringgit. From January to end-August 2021, the ringgit exchange rate depreciated by 3.3% to close at RM4.1552 against the US dollar in line

with movements of regional currencies (Chart 1.5). Exchange rate adjustments continued to be orderly, with the 1-month RM/USD implied volatility averaging at 4.4% (3-year average: 4.5%).

Chart 1.5: Financial Market – Movement of Ringgit and Regional Currencies against the US Dollar



Note: 1. THB - Thai baht, KRW - Korean won, JPY - Japanese yen, PHP - Philippine peso, SGD - Singapore dollar, IDR - Indonesian rupiah, INR - Indian rupee, CNY - Chinese renminbi, TWD - New Taiwan dollar
2. Refers to year-to-date movement as at end-August 2021

Source: Bloomberg

The degree of financial market volatility will remain highly dependent on global and domestic economic recovery prospects, uncertainty surrounding potential shifts in the monetary policy stance in advanced economies and concerns over the effects of COVID-19 variants. The flexible domestic exchange rate regime will continue to serve its critical role as a shock absorber by facilitating appropriate adjustments in the external sector and cushioning the domestic economy from adverse global shocks. Malaysia's deep and liquid bond market and diverse investor base will also support the intermediation of portfolio flows, thus preserving orderly market conditions.

³ Funding via equity and interbank financing, and bond issuances account for 17% and 2.6% of total banking system funding, respectively.

⁴ Based on the steepest increase in bond yields observed in the first quarter of 2021.

⁵ Higher funding costs due to potential tightening in domestic funding conditions accompanying the steepening yield curve.

⁶ Refers to excess income over outgo for life and family funds, and operating profit for general funds.

⁷ Due to the longer duration of liabilities compared to assets as highlighted in the BNM Financial Stability Review for Second Half 2019.

CREDIT RISK

Businesses recovered slightly, but the outlook remains challenging amid a resurgence of COVID-19 cases

The financial performance⁸ of all business sectors, except for tourism-related businesses, improved in the first quarter of 2021 with the easing of movement restrictions, although they have yet to recover to pre-pandemic levels (Chart 1.6). These improvements were especially pronounced among smaller- and mid-sized listed firms, which had been more affected by the movement restrictions in 2020. The improvements also reflected greater success of firms in lifting revenue through digitalisation. Income from e-commerce sales rose by about 27% in the first half of 2021 compared to the same period last year.⁹ Correspondingly, online retail payment transactions¹⁰ increased at a faster rate of 71% in the first half of 2021 (2H 2020: 69%). Many of these changes are likely to contribute to longer-term efficiency gains which will better support business performance and resilience going forward. The share of firms-at-risk¹¹ declined from earlier peaks seen in 2020 (Chart 1.7). However, it remained higher than pre-pandemic levels, mainly reflecting continued challenges faced by firms in the hotels and restaurants, air transport, construction, and real estate sectors.

Smaller- and mid-sized firms continued to maintain higher precautionary liquid buffers to better cope with continued uncertainty in the operating environment. Overall business deposits grew by 3.5% while the median cash-to-short-term debt ratio¹² (CASTD) remained above the 2015-2019 average across most sectors. Firms also remained cautious in taking on additional debt given uncertain economic prospects. Business loan¹³ applications continued to contract at a similar pace to that seen in 2020 (1H 2021: -11.2%; 2020: -11.1%), while loan repayments surpassed pre-pandemic levels, growing strongly by 22% (2020: -4.1%). Net non-financial

⁸ Data as of first quarter of 2021. Data on the financial performance for the second quarter of 2021 was not available in time for this Review due to an automatic one-month extension granted by Bursa Malaysia for listed firms to issue financial statements (normally due on 31 July 2021 and 31 August 2021) following the re-imposition of movement restrictions.

⁹ Source: Department of Statistics, Malaysia.

¹⁰ Include payments through DuitNow & DuitNow Quick Response (QR), Financial Process Exchange (FPX), Interbank GIRO (IBG), National Electronic Bill Payment Scheme (JomPAY), Direct Debit, MyDebit and Interbank Fund Transfer (IBFT).

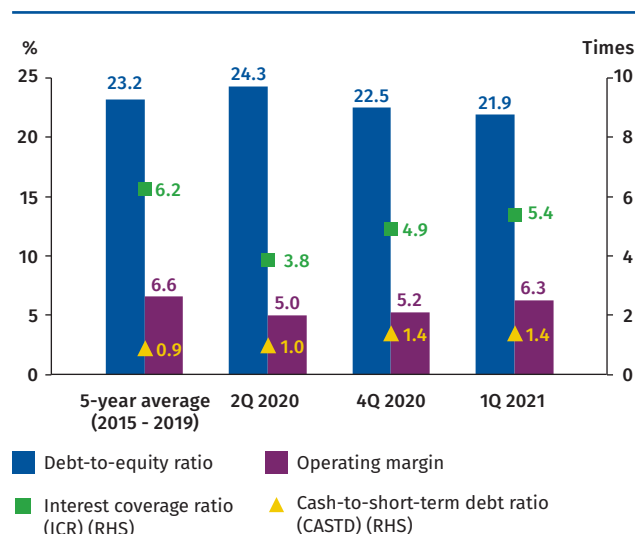
¹¹ Firms-at-risk are defined as listed non-financial corporates with interest coverage ratio (ICR) below the prudent threshold of two times.

¹² Prudent threshold for CASTD is one time.

¹³ Refers to both loans and financing, unless otherwise stated.

corporate (NFC) bond¹⁴ issuances also moderated (January-July 2021: RM12.5 billion; January-July 2020: RM16.9 billion) amid higher redemptions, particularly among firms in the services sector. This led to a further decline in overall business leverage during the period. Nevertheless, larger NFCs with strong financials have continued to take advantage of favourable funding conditions to tap the corporate bond market, with sustained NFC bond issuances (January-July 2021: RM55.1 billion; January-July 2020: RM56.8 billion).

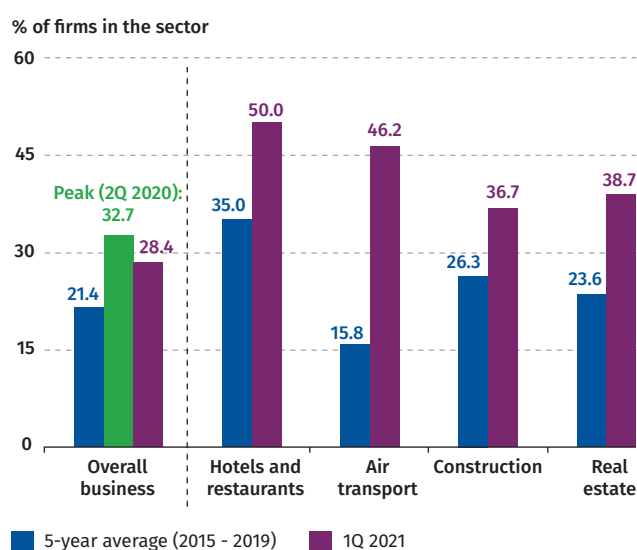
Chart 1.6: Business Sector – Key Financial Performance Indicators



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

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

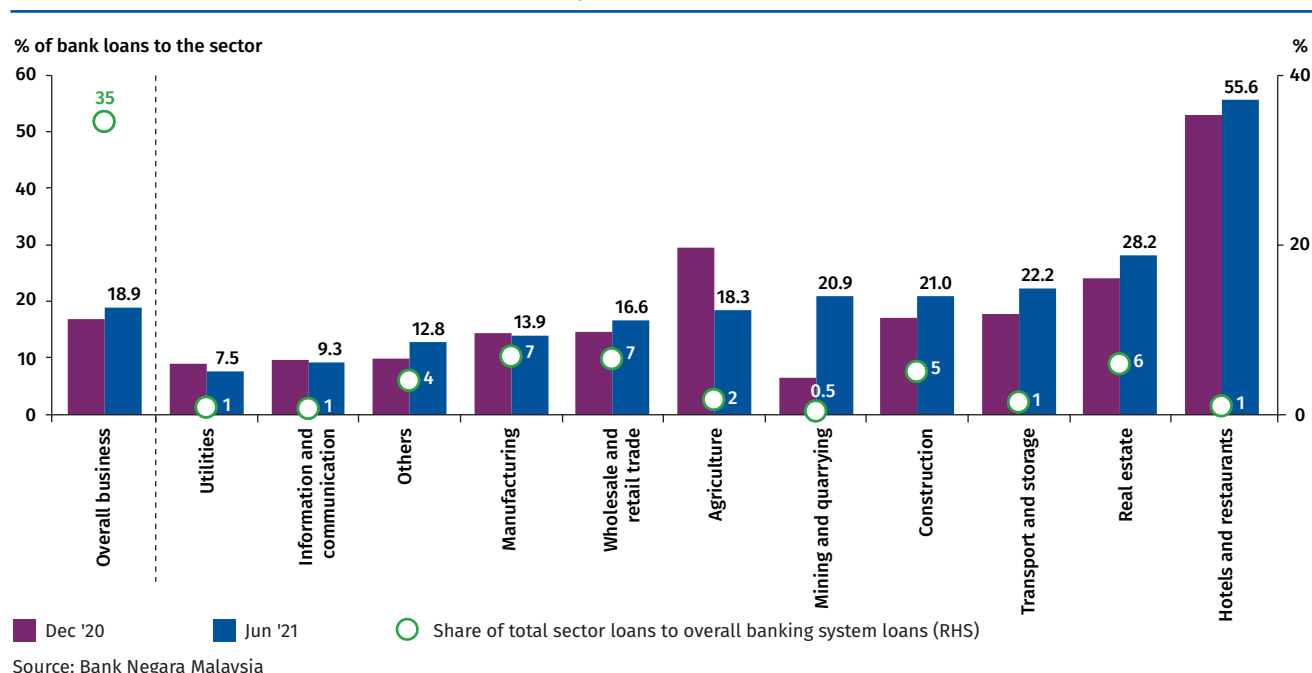
Chart 1.7: Business Sector – Firms-at-risk for Selected Sectors



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

¹⁴ Refers to both bonds and sukuk, including short-term papers, unless otherwise stated. Excludes issuances by Cagamas, financial institutions and non-residents.

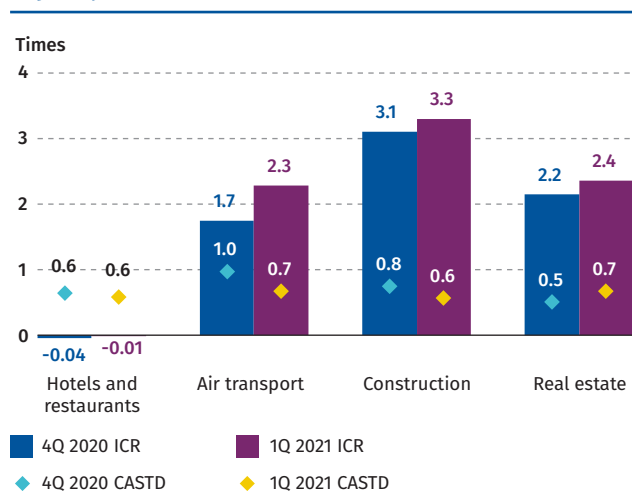
Chart 1.8: Business Sector – Share of R&R Loans by Sector



The re-imposition of stricter nationwide containment measures under the Full Movement Control Order (FMCO) towards the end of the second quarter of 2021 may set back earlier financial improvements, particularly among smaller firms in the construction and services sectors, while prolonging difficulties that were already challenging firms in the tourism-related industries. This was evident from the higher share of loans under repayment assistance as at end-June 2021 across most business sectors compared to December 2020 (Chart 1.8). Industry engagements suggest that firms in sectors more significantly impacted by

movement restrictions continued to face significant cashflow stress and could face renewed pressure on their debt-servicing capacity despite some improvement observed in the first quarter (Chart 1.9).

Chart 1.9: Business Sector – Liquidity and Debt-servicing Capacity Indicators for Selected Sectors



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

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

Large corporates were better placed to manage effects of latest containment measures with SMEs more affected due to low liquidity buffers

Generally, larger corporates were better placed to manage challenges associated with the containment measures given their stronger buffers. Market indicators of default risk¹⁵ for overall listed firms have sustained an improving trend throughout the FMCO, although they remain above pre-pandemic levels, indicating that there is still some way to recovery for most firms. Consistent with this, the number of domestic bond issuers that were downgraded during the period has also remained limited and were due to firm-specific weaknesses. The share of non-SME loans under repayment assistance and assessed by banks to be of significantly higher credit risk¹⁶ declined slightly to 17.2% and 16.8% of total non-SME loans, respectively (December 2020: 17.7% and 17.2%, respectively).

¹⁵ As tracked by the Bloomberg Default Risk (DRSK) indicator which measures the probability of default over a one-year horizon for the sample of Bursa-listed firms. The indicator is based on the Merton distance-to-default measure, along with additional economically and statistically relevant factors.

¹⁶ As measured by loans classified by banks under Stage 2 based on Malaysian Financial Reporting Standard 9 (MFRS 9).

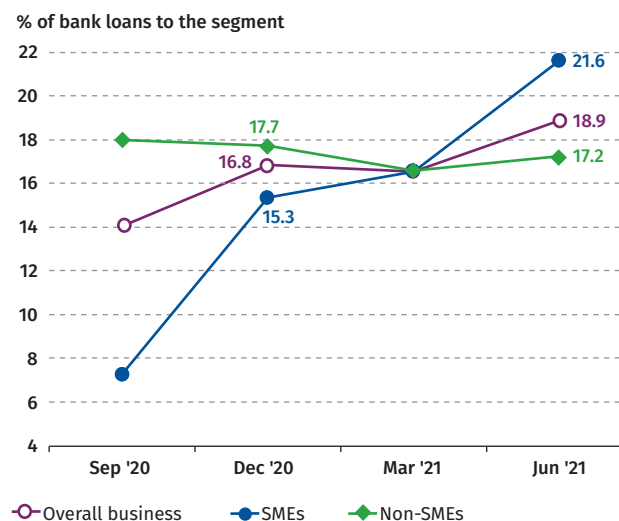
Banks have maintained a high degree of vigilance over large exposures, with heightened monitoring of, and engagements with, borrowers observed among banks to proactively manage credit risks. The Bank's supervisory reviews indicate that the level of provisions held by banks against such exposures has been prudent. This should reduce the need for banks to further increase provisions in this borrower segment by a significant amount, assuming gradually improving economic conditions.

In contrast, the containment measures have disproportionately affected SMEs, with a significant share of SMEs entering the FMCO with relatively low liquidity buffers.¹⁷ The overall proportion of SME loans under repayment assistance spiked to 21.6% (May 2021: 16.9%; December 2020: 15.3%) of total SME loans (Chart 1.10),¹⁸ particularly driven by SMEs in the wholesale and retail, real estate, construction, and manufacturing sectors. The sharp increase in SME loans under repayment assistance has corresponded to periods when banks eased processes (including documentation requirements) for SME borrowers to obtain repayment assistance – notably in December 2020 and June 2021. From industry engagements, SMEs indicated that the cashflow relief from deferred loan repayments is helping them cope better under renewed movement control restrictions, even for those that may be able to continue servicing their debt without repayment assistance. Survey data further suggest that the impact of the movement restrictions on cash buffers of SMEs was less severe in the first half of 2021 compared to that observed at the onset of the pandemic. This reflects some improvement in business conditions, with further support from cost-cutting measures and increased digital adoption. The share of SME loans assessed by banks to be of higher credit risk increased in line with more loans falling under repayment assistance, but remains relatively modest at 14.6% of total SME loans (December 2020: 14.1%). The real estate, wholesale and retail, construction and manufacturing sectors continued to make up the bulk (almost 70%) of these loans. Notwithstanding this, the interrupted re-opening of the economy has led to persisting uncertainty for many SMEs, likely increasing their reliance on policy support measures in the near term.

¹⁷ The BNM Survey on Financial and Non-financial Needs of SMEs (May 2021), as well as surveys conducted by the World Bank (January-February 2021) and the Small and Medium Enterprises Association (SAMENTA) (June 2021) indicate that about 60% of SMEs hold less than three months of cash reserves.

¹⁸ SMEs continued to make up the bulk of the firms benefitting from repayment assistance, accounting for 92% of total business loan accounts approved for rescheduling and restructuring (R&R).

Chart 1.10: Business Sector – Share of R&R Loans by Segment



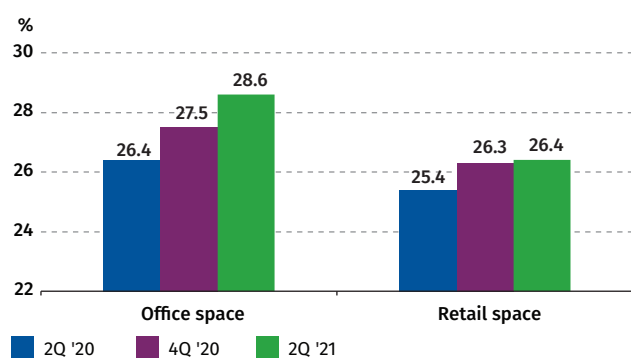
Source: Bank Negara Malaysia

In the commercial real estate sector, occupancy and rental rates of shopping complexes and office space continued to face downward pressure (Chart 1.11 and Chart 1.12). Despite lower incoming supply following some cancellations and deferrals of projects, vacancy rates increased across all key states with the completion of several commercial property developments amid persistent weak demand. Landlords continued to give rent-free periods, rental concessions, and short-term rental assistance packages to attract new tenants and retain existing ones. Average rental rates for office and retail space in the Klang Valley have now declined for four consecutive quarters since the third quarter of 2020. Despite various extensions of rental relief, up to half of mall operators reported significant difficulties collecting rent from their tenants.¹⁹ This will continue to adversely impact the cashflows of mall owners, particularly for malls in non-prime locations with relatively higher vacancy rates. Looking ahead, vacancy rates could continue to rise and place further pressure on rents as a result of structural changes brought about by the pandemic, including flexible working arrangements and a shift in consumer spending patterns towards e-commerce. The expiry of protections under the COVID-19 Act 2020 that prohibit non-paying commercial property tenants from being evicted from occupied premises could further weigh on occupancy rates. Although this is not expected to

¹⁹ Based on a survey conducted by the Malaysia Shopping Malls Association (PPK Malaysia) in August 2021.

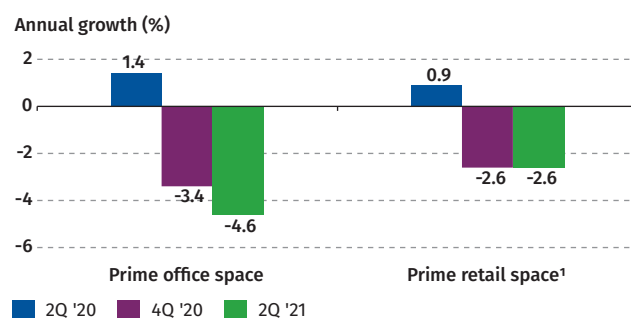
significantly increase risks to financial stability given the limited direct bank lending exposures to office and retail commercial properties (3.1% of banking system loans) and conservative bank lending practices, broader spillovers to the economy could heighten risks for banks.

Chart 1.11: Business Sector – Vacancy Rates for Office and Retail Space in Klang Valley



Source: Jones Lang Wootton

Chart 1.12: Business Sector – Rentals for Prime Office and Retail Space in Kuala Lumpur



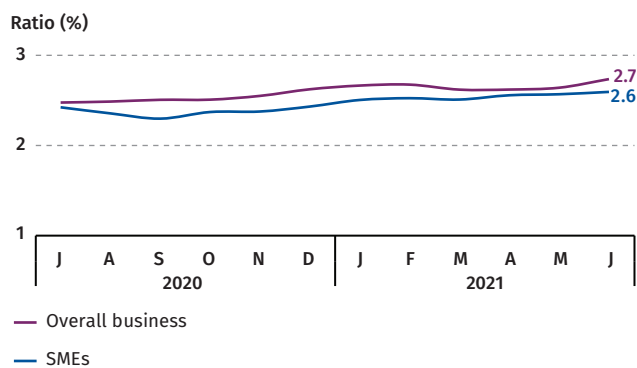
¹ Average rents of the most prominent shops in major shopping complexes

Source: Knight Frank Malaysia and Savills Malaysia

Repayment assistance programmes, and support measures by the Government and the Bank, have thus far contained any notable increase in defaults, with the overall business loan impairment ratio remaining broadly stable at 2.7% (Chart 1.13). Banks are nevertheless preparing for higher defaults and have continued to build up provisions against the materialisation of potential credit losses when support measures are eventually unwound (refer to the Information Box on 'Banking Institutions' Provisioning Practices to Mitigate Elevated Credit Risk from the Pandemic'). Additionally, under a simulated scenario of an extended drag on the economy and the absence of policy interventions,

banks are expected to remain resilient even if business impairments were to reach up to three times the current level by end-2022.²⁰

Chart 1.13: Business Sector – Gross Impaired Loans



Source: Bank Negara Malaysia

The resilience of banks is continuing to support financing to viable SMEs. During the first half of this year, more than a quarter of approved SME loans were to first-time borrowers, while approved loans to young SMEs²¹ accounted for almost 20% of the total volume of SME loans approved. This is helping to sustain business activity, particularly as businesses seek to pivot their operations or pursue new business opportunities in response to the immediate and foreseeable longer-term impacts of the pandemic. Overall outstanding SME loans grew by 6% (December 2020: 9.6%), with approval rates for SME loans improving to 77.3% (December 2020: 73.3%; 5-year average: 82.8%). Financing for investment-related activities,²² which will expand the productive capacity of SMEs, continued to grow albeit at a more moderate pace (June 2021: 2.4%; December 2020: 7.6%). Meanwhile, financing for working capital increased by 9.2% (December 2020: 12.3%), driven primarily by the consumer-facing sectors such as wholesale and retail, hotels and restaurants, and transportation sectors which continued to face headwinds in the challenging environment.

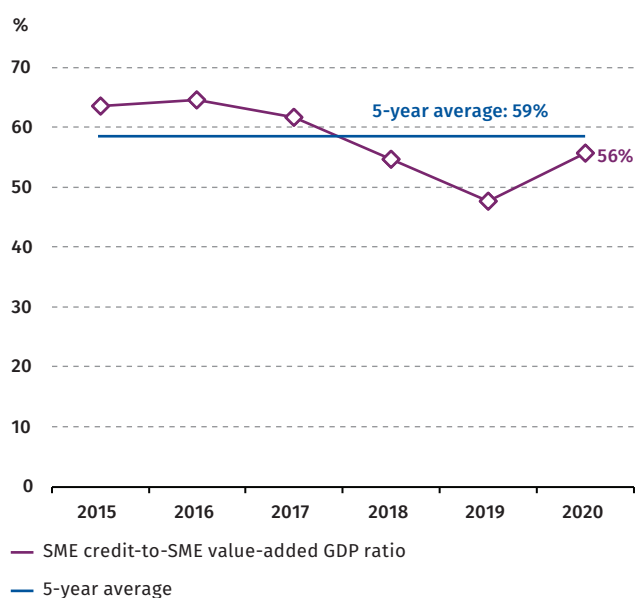
²⁰ Refer to the section on 'Assessing the Resilience of Financial Institutions' in the BNM Financial Stability Review for Second Half 2020 for further details.

²¹ Defined as SMEs established for not more than three years.

²² Investment-related activities include loans for purchase of securities, transport vehicles, non-residential properties, and fixed assets, as well as for construction and other purposes.

BNM's Fund for SMEs is also helping to further support lending to SMEs. The Fund, which allows banks to offer financing at concessionary rates by reducing banks' cost of funds and enhancing borrowers' credit profiles through pre-packaged guarantees, currently represents about 5% of outstanding financing to SMEs, compared to the pre-pandemic average (2015-2019) of 2%. In addition, banks also leveraged other credit guarantee schemes provided by Credit Guarantee Corporation Malaysia Berhad (CGC) and Syarikat Jaminan Pembiayaan Perniagaan Berhad (SJPP). About 7% of outstanding financing to SMEs is backed by credit guarantees under these schemes. This remains markedly higher than the pre-pandemic level (2015-2019 average: 4%), reflecting greater caution by banks until there is better visibility on the performance of SME loans that are currently under repayment assistance. As noted earlier, SME borrowers have also been more hesitant to take on additional debt unless necessary. These factors are serving to contain risks from increased leverage among SMEs despite higher borrowings for working capital induced by the pandemic (Chart 1.14).²³ However, the more

Chart 1.14: Business Sector – SME Credit-to-SME Value-added GDP Ratio



Note: Decline observed during 2018 and 2019 partly reflects the reclassification exercise of SMEs to non-SMEs by financial institutions, where a net amount of RM60.4 billion of outstanding SME loans was reclassified as outstanding non-SME loans

Source: Bank Negara Malaysia and Department of Statistics, Malaysia

²³ SMEs have typically relied more on personal funds and retained earnings to support their businesses prior to the pandemic. Findings from the BNM SME Finance Survey 2018 showed that most firms tapped into own cash and retained earnings (62% of respondents), while about a third has debt with financial institutions (including microfinance institutions).

cautious risk appetite of banks could also hurt recovery if a pullback in bank lending becomes more pervasive due to heightened concerns over asset quality. The average value of new working capital loans extended by banks since the onset of the pandemic has been significantly smaller (by about half) compared to pre-pandemic loan values.

Banks remain well-provisioned to withstand potential credit losses from businesses

In this environment, policy measures that complement bank lending to SMEs while shoring up confidence among banks to take risks onto their own balance sheets will continue to play an important role in supporting the economic recovery. To this end, financing support in the form of the Danajamin PRIHATIN Guarantee Scheme (DPGS), and credit guarantees by CGC and SJPP remain available for businesses. The Bank has also increased allocations for the various facilities under the Bank's funds for SMEs, and provided more flexibility under the Targeted Relief and Recovery Facility (TRRF) and PENJANA Tourism Financing (PTF) to enable SMEs to refinance existing debt at lower costs while tapping fresh funds.²⁴ Additional relief measures introduced in the PEMERKASA+ and PEMULIH assistance packages, including extended wage subsidies, tax incentives, and government grants are also expected to provide further support to businesses. For businesses that continue to face difficulties in servicing their debt obligations, banks remain well-positioned to extend continued repayment assistance tailored to the specific circumstances of borrowers. This continues to be complemented by various platforms available to facilitate timely and effective debt workouts with creditors.²⁵ As the economic recovery gains traction, the ability of more businesses to resume servicing their debt will also further improve the risk appetite for new bank lending, especially to SMEs.

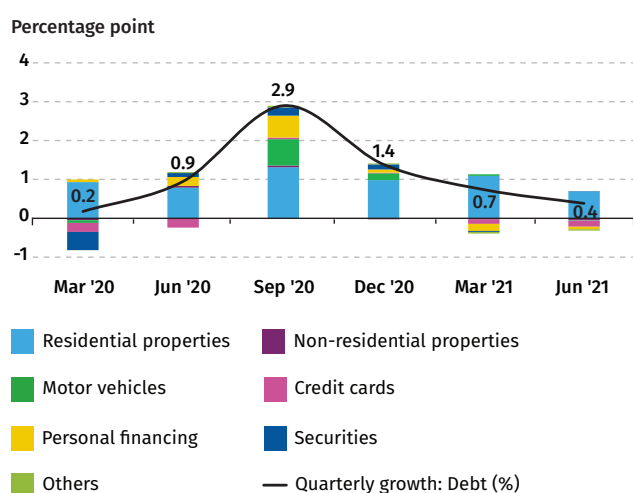
²⁴ The flexibility took effect on 5 July 2021, with the following features: i) Refinancing allowed for up to 50% of the total financing approved for the PTF and up to 30% for the TRRF; and ii) Not for refinancing existing business financing under the BNM's Fund for SMEs.

²⁵ Refer to the Information Box on 'Debt Resolution Mechanisms for Viable Businesses Facing Temporary Financial Distress' in the BNM Financial Stability Review for Second Half 2020 for further details.

Most household borrowers remain reasonably resilient, with policy support measures providing additional buffers for households facing higher levels of financial stress

Household debt²⁶ growth was broadly sustained as at end-June 2021, expanding by 5.5% (December 2020: 5.5%) over the same period last year even as more borrowers resumed payments on their loans after exiting from loan moratoria. Quarter-on-quarter trends, however, revealed that household debt growth moderated during this period as the strong response to various home ownership and car purchase incentives rolled out in the second half of 2020 tapered off (Chart 1.15). Personal financing and credit card loans also declined as movement restrictions weighed on consumer spending. At the aggregate level, there is little sign of a sharp deleveraging by households, suggesting that many households continue to have the financial capacity to take on new debt.

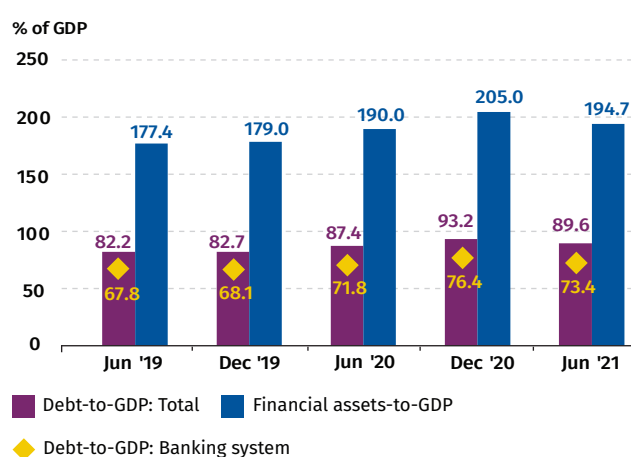
Chart 1.15: Household Sector – Quarterly Growth of Debt



Source: Bank Negara Malaysia

Bank lending to households also held steady (5.2% year-on-year growth; December 2020: 5%), particularly for secured loans, amid a more cautious outlook on credit risk. Around 70% of new banking system disbursements²⁷ in the first half of 2021 continued to be channelled to middle- and high-income borrowers who have greater capacity to take on new debt, with 40% and 20% of total new disbursements going towards the purchase of residential properties and cars, respectively. Importantly, lending continued to be underpinned by sound underwriting standards, with the debt service ratios of newly-approved and outstanding household loans maintained at a prudent level of 41% and 35% (December 2020: 43% and 35%), respectively. Similarly, the share of borrowers with a debt service ratio above 60% has remained at around a quarter of total household borrowers (24%; December 2020: 25%). A significant proportion (66%) of the debt held by these borrowers are associated with the middle- and high-income groups who are more likely to be able to withstand financial shocks. Overall household debt-to-GDP ratio improved to 89.6% but remained elevated amid the sluggish recovery in nominal GDP (Chart 1.16).

Chart 1.16: Household Sector – Key Ratios



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

²⁶ Extended by both banks and non-bank financial institutions.

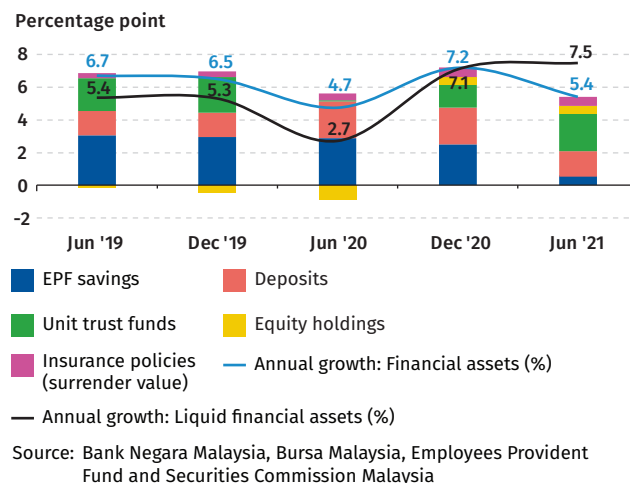
²⁷ Excludes credit cards.

Risks in the household sector are confined to a small but deeply stressed segment

Household financial assets registered an annual growth of 5.4% in June 2021 (December 2020: 7.2%) (Chart 1.17). However, in level terms, aggregate financial assets declined between December 2020 and June 2021 by RM3 billion, mainly driven by overall retirement savings which were significantly lower due to the i-Sinar and i-Lestari programmes.²⁸ Over the longer term, the drawdown of such savings could compound future difficulties for some households that are already likely to have insufficient savings for retirement.²⁹ In the short term, however, the flexibility provided for households to withdraw their retirement savings early has provided an additional source of funds to help them tide over current financial strains. Conservative simulations³⁰ by the Bank suggest that the share of borrowers that would have to draw on pre-existing savings to meet their debt obligations and living expenses over the next 18 months in the event of assumed income and unemployment shocks is likely to be relatively modest, at between 11% and 15% of borrowers.³¹ Of these borrowers, those who are more likely to deplete their cash or deposit buffers, and are thus most at risk, is estimated to form a much smaller

share (1.9%) of household borrowers. About two thirds (65%) of such at-risk borrowers comprise those earning less than RM5,000 monthly who were also more highly leveraged compared to other income groups pre-COVID-19. Exposures of banks to these most vulnerable borrowers are estimated to account for only 1.3% of banking system loans. Most household borrowers therefore appear to have sufficient financial buffers and remain reasonably resilient, with policy assistance measures providing additional reserves against potential shocks. This is also a reflection of more robust affordability assessments conducted by banks over the years following the implementation of responsible lending standards by the Bank in 2012.

Chart 1.17: Household Sector – Annual Growth of Financial Assets



²⁸ Under the i-Sinar and i-Lestari programmes by the Employees Provident Fund (EPF), individuals may withdraw a portion of their retirement savings.

²⁹ Based on a study conducted by EPF, two out of three active EPF contributors are projected to have insufficient retirement savings to meet a minimum pension of RM1,000 per month. Refer to EPF's 'Social Protection Insight' Volume 3 (2018) for further details.

³⁰ Refer to the Information Box on 'Forecasting Households' Time to Default' in the BNM Financial Stability Review for First Half 2020 for further details on the methodology.

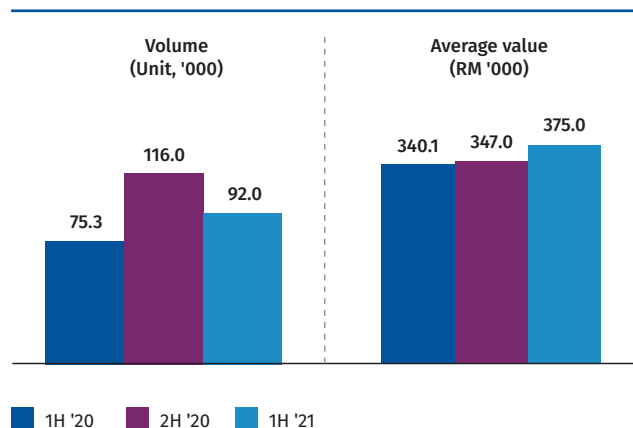
³¹ This estimation excludes the impact of any policy measures to ease borrowers' cashflows, such as repayment assistance programmes after the first quarter of 2021, cash transfers from the Government, or the withdrawal of retirement funds. The drawdown of buffers is simulated starting from the second quarter of 2020.

Developments in the Residential Property Market

In the first half of 2021, housing transactions were slower compared to the second half of 2020 as the effects from the positive response to various home ownership incentives introduced by the Government subsided (Chart 1.18). Tighter movement restrictions and operational frictions following a resurgence of COVID-19 cases also weighed on market activity in the second quarter. Despite the moderation in activity, average transaction values grew at a stronger pace. This was supported by transactions for properties priced below RM500,000 which accounted for more than 80% of housing transactions. Housing transactions during the period also continued to be lifted by home purchases ahead of an earlier anticipated expiry of the Home Ownership Campaign in end-May 2021.³² Demand for financing has recovered to above pre-pandemic levels, with housing loan applications increasing across most price segments compared to the second half of 2020 (Chart 1.19). Approval rates have also broadly recovered closer to levels recorded before the pandemic (overall approval rate in 1H 2021: 73.2%; 2020: 71.5%; 2013-2019 average: 75.5%), except for properties priced above RM1 million where approval rates have continued to reflect the more cautious risk appetite of banks.

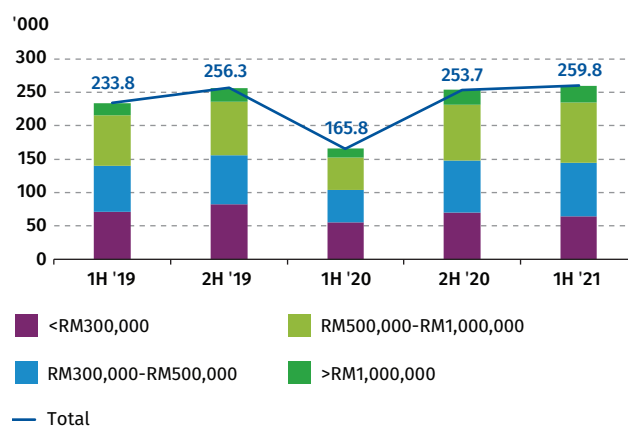
In line with the slower market activity, the number of unsold houses rose to 181,460 units as at the second quarter of 2021 (4Q 2020: 167,104 units), largely driven by houses priced above RM300,000 and serviced apartments that are under construction. Several new housing launches in previous quarters which would have experienced slower sales during this period also contributed to the increase in unsold units. Market observers are expecting activity to pick up with the gradual easing of movement restrictions and recovery in economic activities, as observed in the second half of 2020. Incoming supply of newly-launched residential properties would likely shift towards the mass market price segments, as seen in the higher share of properties priced at RM500,000 and below (1H 2021: 71.6%; 2015-2019 average: 65.9% share). Such adjustments will continue to reduce demand-supply mismatches and improve overall housing affordability. Along with sustained demand among first-time house buyers, this is expected to mitigate risks of a significant house price correction. Based on the latest release of the National Property Information Centre (NAPIC) report for the first half-year of 2021, house price growth is likely to have remained broadly flat in the first six months of 2021 (preliminary estimates of Malaysian House Price Index (MHPI) growth: -0.3%),³³ with market expectations of a recovery heading into 2022.

Chart 1.18: Property Market – Housing Transactions



Source: National Property Information Centre (NAPIC)

Chart 1.19: Property Market – Volume of Housing Loan Applications by Price Segment



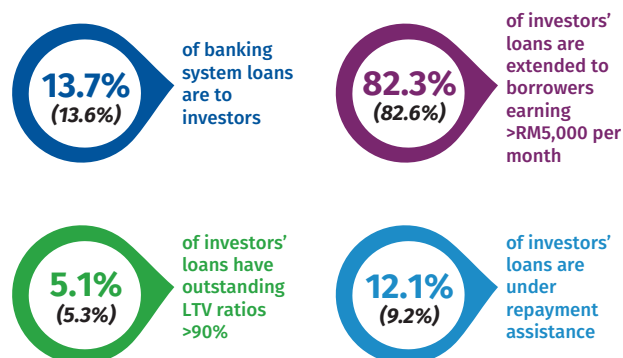
Source: Bank Negara Malaysia

³² The Home Ownership Campaign has since been extended to 31 December 2021 under the Government's PEMERKASA+ assistance package.

³³ Estimated from the average MHPI growth for 1Q and 2Q 2021. It is worth noting, however, that based on historical trends, the final MHPI estimates may likely be revised upwards to reflect additional data submissions for the quarter.

Risks to household balance sheets as well as potential losses to banks from housing loan exposures remained manageable. In particular, risks from household investors³⁴ in the housing market remained contained amid prevailing low interest rates. Such borrowers have higher incentives to default if house prices were to decline and fall into negative equity or they face a loss of rental income. Banks' exposures to household investors have risen slightly from pre-pandemic levels to 13.7% of overall banking system loans (December 2020: 13.6%; December 2019: 13.3%) (Diagram 1.1). However, the annual growth rate of banks' housing loan exposures to owner-occupiers continued to outpace that of exposures to household investors (8.4% and 5.2%, respectively; December 2020: 8.7% and 5%). So far, household investors are predominantly higher-income earners who are typically more resilient to income shocks. The average loan-to-value (LTV) ratio of outstanding housing loans by household investors also remained relatively low and stable (54.8%; December 2020: 54.9%), thus preserving ample buffers against a potential decline in house prices.

Diagram 1.1: Household Sector – Key Statistics on Household Housing Investors



Note: (...) refers to position as at end-December 2020

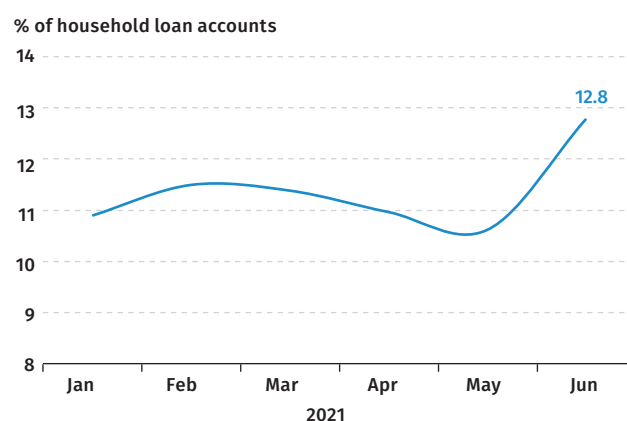
Source: Bank Negara Malaysia

Some pockets of household investors may be experiencing challenges in servicing their debt based on repayment assistance data, but risks to banks stemming from these borrowers are judged to be low, given the small share of investors in negative equity at less than 1% of total housing loans. Despite low interest rates,

existing macroprudential measures are believed to have reinforced prudent lending behaviour among banks and mitigated a credit-fuelled increase in residential property prices such as that experienced in some other jurisdictions. Any recalibration of macroprudential measures will take into account the Bank's overall assessment of risks to household resilience and implications for financial stability.

Repayment assistance extended by banks continued to provide support to distressed household borrowers, staving off further damage to their finances and, in turn, the economy and financial system at large. As at end-June 2021, 12.8% of household loan accounts, or 16% of outstanding household loan exposures, were under a repayment assistance plan³⁵ (December 2020: 8.9% and 11.1%, respectively). Borrowers earning less than RM5,000 monthly formed two-thirds of these loan accounts. While access to repayment assistance is helping to temporarily support borrowers' debt-servicing capacity, a more entrenched economic recovery remains key to restoring the longer-term financial health of borrowers. Some early positive signs of this were observed, as the total share of household accounts under repayment assistance began to fall between February (11.5%) and May (10.6%), just before the FMCO was imposed (Chart 1.20).

Chart 1.20: Household Sector – Accounts under Repayment Assistance



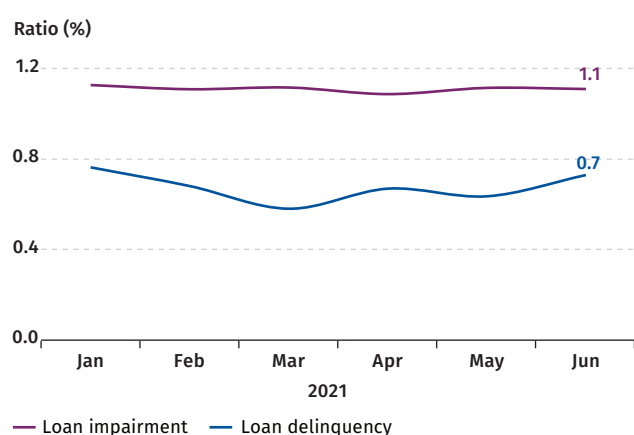
Source: Bank Negara Malaysia

³⁴ A household investor, in this context, is defined as an individual borrower with more than one housing loan.

³⁵ Either in the form of a loan repayment moratorium or reduced instalment terms. Figures are based on repayment assistance applications that were approved by banks and subsequently accepted by customers.

Additionally, there was a marked shift towards reduced instalment plans, as some borrowers who previously opted for a loan moratorium regained capacity to partially service their debts. The share of household loans classified by banks in Stage 2³⁶ was correspondingly lower at 6.9% (December 2020: 7.3%). While the transition to more targeted repayment assistance during this period has not been accompanied by a significant deterioration in household asset quality (Chart 1.21), renewed lockdown measures followed by a further expansion of repayment assistance by banks in June and July³⁷ to maintain support for borrowers continue to mask the true extent of potential impairments going forward.

Chart 1.21: Household Sector – Loan Impairment and Delinquency Ratios in the Banking System

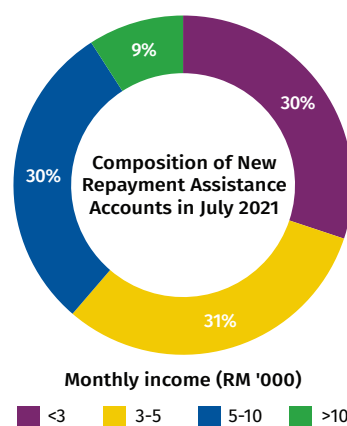


Source: Bank Negara Malaysia

As at end-July 2021, the share of household loan accounts and exposures under repayment assistance rose sharply to 25.4% and 30% of total household accounts and loan exposures, respectively. Applications for the latest moratorium peaked in the first half of July, with weekly applications declining steeply thereafter. Borrowers who opted for the latest assistance

packages were spread across all income groups (Chart 1.22). This, coupled with the more flexible eligibility criteria³⁸ for assistance, suggests that the recent rise in accounts under repayment assistance is not solely driven by borrowers in distress. Recent surveys by the Bank³⁹ and anecdotal evidence indicate that about a third of borrowers that applied for repayment assistance are partly using it to build up precautionary buffers, and to a lesser extent, for investments in the equity market. These borrowers are expected to have less difficulty in resuming their repayments when the current repayment assistance ends. The share of accounts associated with temporarily distressed borrowers under a repayment assistance plan is also expected to shrink over time as economic conditions improve, as observed between February and May this year. Potential credit losses that may materialise are assessed to be adequately covered by bank's loan loss provisions (refer to the Chapter on 'Financial Institution Soundness and Resilience').

Chart 1.22: Household Sector – New Repayment Assistance Accounts by Monthly Income Group



Source: Bank Negara Malaysia

³⁶ Refers to loans that exhibit a significant increase in credit risk under MFRS 9.

³⁷ With the imposition of the FMO towards the end of the second quarter, banks began to offer individual borrowers the option to opt for a 6-month loan moratorium as part of the PEMULIH assistance package.

³⁸ Under the earlier repayment assistance packages offered by banks, automatic approval for assistance was only granted to lower-income group borrowers or those facing economic hardship.

³⁹ BNM's Consumer Sentiment Surveys from December 2020 to May 2021.

OPERATIONAL RISK

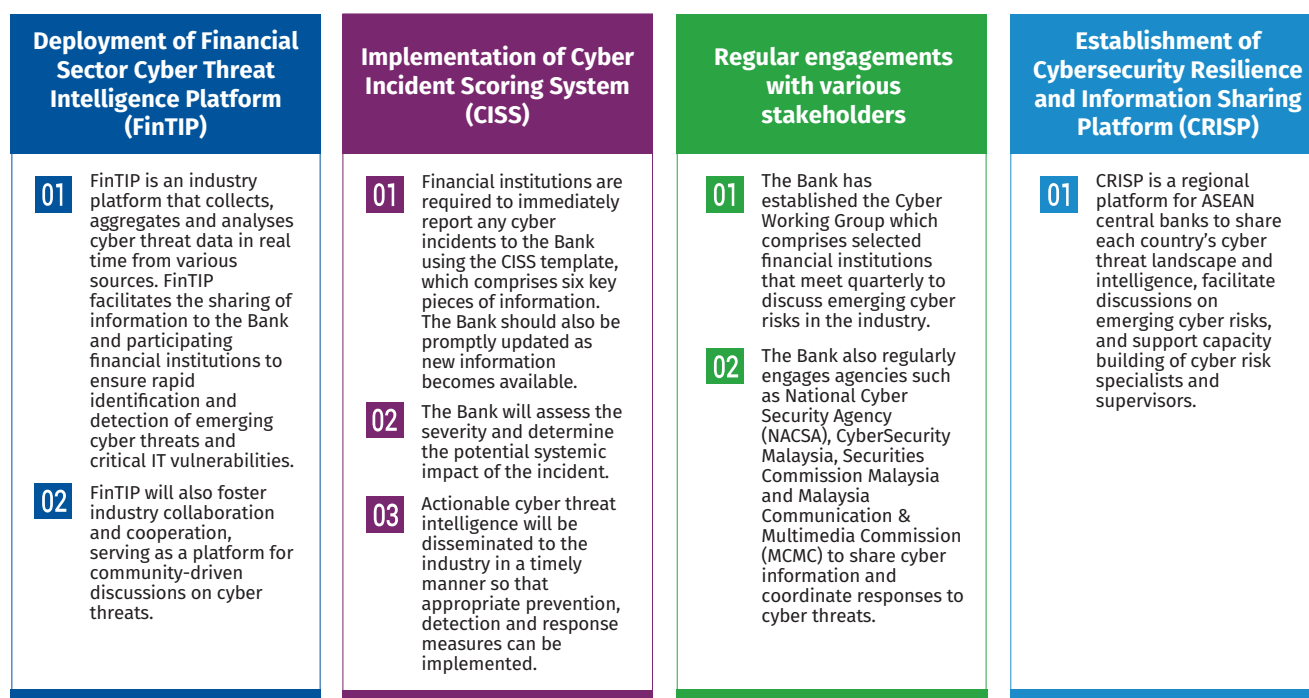
Financial institutions remained operationally resilient and continue to strengthen their cyber security risk posture

Financial institutions adapted relatively quickly to the stricter movement restrictions in the first half of 2021, leveraging earlier experience in managing operational challenges since the onset of the pandemic. No major operational disruptions were recorded at the system-wide level, with operational risk losses declining by 18.7% to RM118.1 million⁴⁰ compared to the first half of 2020. Financial institutions, however, remained highly vigilant of potential risks from information technology (IT) disruptions and cyber-attacks. Stronger detective and recovery capabilities developed by financial institutions have prevented any system-wide disruptions caused by IT and cyber incidents encountered during the period. Financial institutions have also further strengthened controls around IT enhancement projects to minimise IT failures caused by processing errors. Critically, ongoing initiatives to

improve and maintain good cyber hygiene practices continue to be a high priority. Ongoing enhancements to financial institutions' business continuity plans (BCPs) and disaster recovery plans (DRPs) to reflect remote working arrangements have also led to further improvements in financial institutions' crisis preparedness.

The various collaborative arrangements in place at the industry, national and regional levels continue to support the financial sector's ability to swiftly detect and respond to cyber threats, thus ensuring the uninterrupted provision of essential financial services (Diagram 1.2). These arrangements were further enhanced with the operationalisation of the Financial Sector Cyber Threat Intelligence Platform (FinTIP)⁴⁰ in September 2021. Membership of the Cyber Working Group (CWG) established by the Bank has also expanded to include two additional financial institutions in 2021, resulting in a total of 11 members. The CWG continues to play an active role in facilitating swift communications between members on emerging cyber threats and engagements on initiatives to maintain a strong cyber defence posture. At the regional level, the Bank continues to leverage the Cybersecurity Resilience and Information Sharing Platform (CRISP) to exchange information among ASEAN central banks.

Diagram 1.2: Industry Arrangements to Support Detection and Responses to Cyber Threats



Source: Bank Negara Malaysia

⁴⁰ Refer to the Information Box on 'Establishment of the Financial Sector Cyber Threat Intelligence Platform (FinTIP)' for further details on FinTIP.

Ransomware attacks and vulnerabilities within third party service providers (TPSPs) have been a key focus of strengthened internal policies of financial institutions, and are also sources of risk that the Bank is focused on. In recent months, sporadic ransomware attacks caused some disruptions to the business operations of two financial institutions, but they were effectively contained. Risks associated with the use of TPSPs have also increased substantially for some financial institutions that have relied more heavily on third party services as a result of operational adjustments made in response to the pandemic. These risks include TPSPs that may be unable to meet service level agreements due to operational restrictions imposed under extended movement control orders; IT infrastructure of TPSPs that are inadequately protected against IT failures and cyber threats; and weak BCP and DRP of TPSPs that may hamper their ability to effectively support financial institutions during a crisis.

The Bank is closely monitoring measures by financial institutions to manage these risks. Financial institutions have intensified periodic reviews of the risk controls and financial sustainability of TPSPs to ensure the continuity of services rendered. This includes specific reviews of the BCPs of TPSPs. Some financial institutions have also enhanced the fee structures that are tied to service level agreements to better align risk controls and the quality of services delivered by TPSPs. Financial institutions are also strengthening their response strategies to manage potential disruptions to TPSP services by including the sudden unavailability of TPSPs as part of financial institutions' own BCP tests and contingency plans.

The concentration of financial institutions to specific TPSPs, and contagion risks associated with interlinkages between TPSPs and the financial system, could pose systemic risks. With more services moving onto digital platforms supported by third parties, there is a need to improve visibility over such risks at both the institution and system levels. This will require financial institutions to comprehensively map their interlinkages with service providers across the value chain (both physically and virtually) in order to identify and monitor concentration and contagion risks. This in turn can be developed into a cyber contagion map at the system-wide level to provide an aggregate view of

the relevant interdependencies and interconnections between underlying IT components, TPSPs that support the financial system, and the financial network. Results from these assessments are expected to better inform crisis simulation exercises, risk mitigations and BCPs for the financial sector going forward.

As remote and flexible working arrangements become the norm, the Bank has also increased its focus on the adequacy of controls by financial institutions to protect confidential data given that the use of unsecured platforms and devices to perform day-to-day tasks poses significant IT security risks. In general, conditions for remote access to confidential data and critical applications continue to be one of the key security considerations, and for many financial institutions, such access is limited to narrowly defined circumstances with enhanced cyber security safeguards. For example, almost all financial institutions have deployed data loss prevention tools, established clearly defined response and recovery strategies to limit the impact of any data breach, and enforced restricted user access to confidential data. Financial institutions are expected to continuously re-evaluate the adequacy of these controls in line with prospects of keeping remote and flexible working arrangements in place for longer than expected, or adopting permanent changes in their business operations as a result of the pandemic.

Payment and settlement systems continued to be operationally resilient

Both the Real-time Electronic Transfer of Funds and Securities System (RENTAS)⁴¹ and retail payment systems (RPS) continued to maintain high system availability, with no major incidents or service disruptions. Robust BCP measures such as split operations, high level of redundancy, and reserve teams supported the smooth operations of the payment systems. The Bank also conducted an assessment on RPS which led to actions by payment system operators to further strengthen control measures that will increase the cyber resilience of RPS. These include measures to increase dedicated resources to manage cyber security operations, strengthen monitoring and control systems, and enhance security testing techniques and

⁴¹ RENTAS is a real-time gross settlement system for interbank fund transfers, debt securities settlement and depository services for scripless debt securities.

methodologies. With the launch in June 2021 of a QR payment linkage with PromptPay⁴² that enables instant cross-border QR code payments in Malaysia and Thailand, robust risk management measures were also jointly coordinated between the Bank and Bank of Thailand (BOT) to ensure a strong and secure cross-border payment network.

As real-time payment transactions continued to grow at an accelerated pace, the associated credit and settlement risks in several RPS that are settled on a deferred net settlement (DNS) basis have increased. To safeguard financial institutions against settlement risks, the Payments Network Malaysia Sdn Bhd (PayNet) is working to put in place collateralisation arrangements for DNS on the Real-time Retail Payments Platform (RPP), Financial Process Exchange (FPX), MyDebit and Shared ATM Network (SAN) by end-2021. Under the arrangements, participants in these systems will be required to set aside cash and/or securities as collateral to meet their settlement obligations.

On 1 July 2021, the Bank assumed operations of RENTAS from PayNet as part of plans to further strengthen the end-to-end risk management of RENTAS. The transfer was completed smoothly with no operational disruptions. This transfer will reduce integration and coordination risks between the Bank and PayNet as the Bank will now own, operate and provide the technology and infrastructure support to the system. In line with international best practices, clear and transparent governance arrangements have been preserved following the transfer. Notably, the Bank's responsibilities for the regulatory and supervisory oversight of key financial market infrastructures, including RENTAS, and its role as the operator of RENTAS, will continue to be clearly segregated within the Bank. A dedicated management committee has also been established to oversee the operations, development, and risk management of RENTAS. The committee includes four external representatives with relevant experience and expertise in IT as well as the financial technology (FinTech) and payments ecosystem.

⁴² PromptPay is a real-time retail payment system in Thailand that facilitates payments and fund transfers via electronic channels (e.g. internet banking, mobile banking and ATMs).

Establishment of the Financial Sector Cyber Threat Intelligence Platform (FinTIP)

Cyber-attacks can pose considerable risks to financial stability with the financial industry expected to face threats that are growing in frequency, sophistication and scope. This development is not unique to Malaysia. Globally, there has been an increasing number of cyber-attacks that have brought down key business operations. Of note, some of these were orchestrated by threat actors using highly sophisticated tactics which exploit the higher number of entry points into the network and systems of financial institutions as a result of the rapid adoption of Internet-facing systems and greater digitalisation of financial services. These threat actors operate in an active underground ecosystem where they share information, coordinate attacks, recruit hackers, sell compromised data and provide cybercrime services.

The increased intensity of such attacks and their well-coordinated nature call for a coordinated financial sector response. While financial institutions have continued to invest extensively in IT hardening and cyber resilience in their respective institutions, an industry-wide, multi-stakeholder strategy to defend the financial system against common cyber threats is needed to reinforce the efforts of individual financial institutions. To this end, the Bank has been working to establish a cyber threat intelligence and collaboration platform for the financial industry. The Financial Sector Cyber Threat Intelligence Platform, or FinTIP, commenced operations in September 2021.

FinTIP to strengthen industry collaboration and foster information sharing

The FinTIP is intended to achieve three key goals:

- Perform rapid assessment and dissemination of information on emerging cyber threats and critical IT vulnerabilities;
- Foster information sharing and collaboration across the industry via a secured and trusted platform; and
- Increase cyber situational awareness to aid strategic decision-making.

The operation of FinTIP by the Bank helps to build trust, thereby reducing a key barrier to widespread information sharing and collaboration between financial institutions and other key stakeholders. Stakeholders in public and private sectors can participate and contribute to FinTIP by confidentially sharing information on cyber threats, incidents and IT vulnerabilities in near real-time. At the national level, FinTIP serves as a bridge to connect and facilitate cross-sector information exchange between the financial sector and other economic sectors via entities such as the National Cyber Security Agency (NACSA), CyberSecurity Malaysia (CSM), Malaysian Communication and Multimedia Commission (MCMC) and Securities Commission Malaysia (SC).

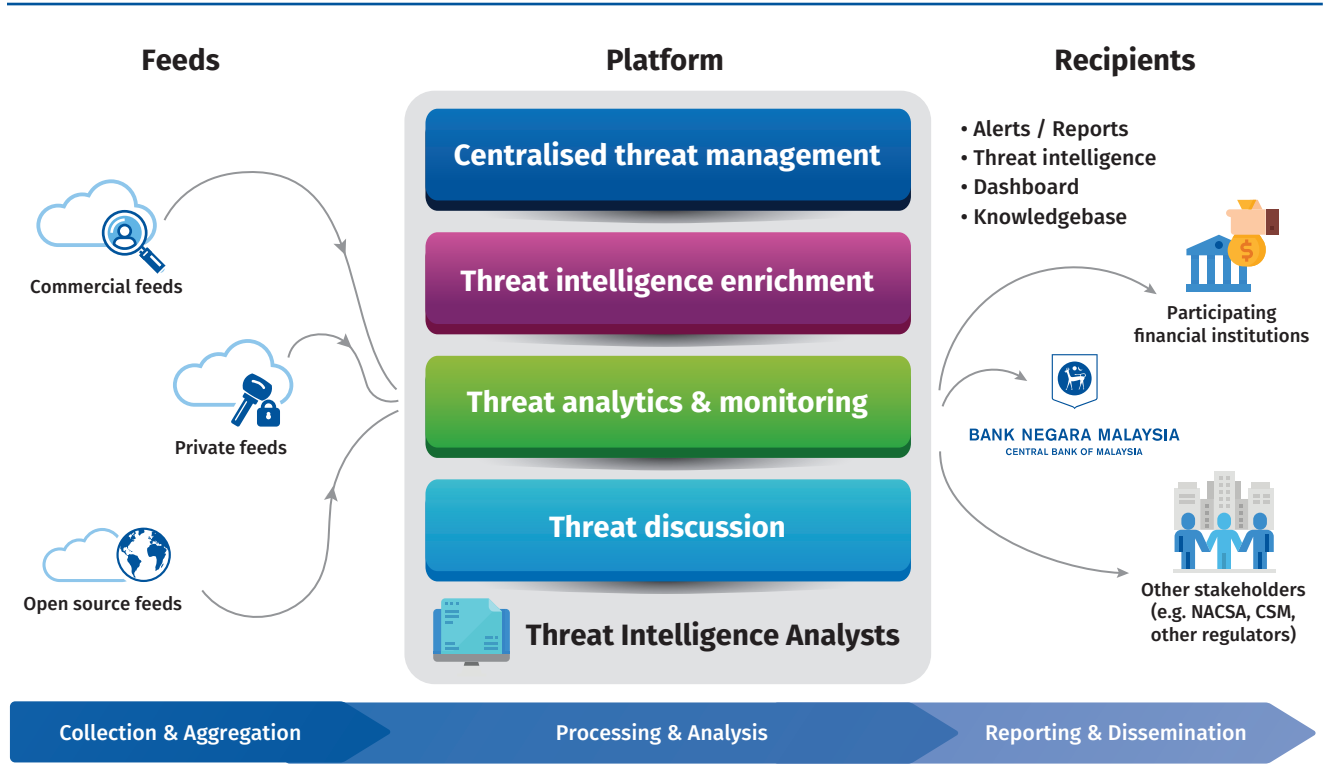
Rapid information assessment and dissemination

FinTIP, which operates on a 24x7x365 basis, will collect, aggregate and analyse cyber threat intelligence and IT vulnerabilities from various sources, and distribute relevant information to stakeholders in a timely manner (Diagram 1.3). This analytical platform leverages a combination of machine algorithms and human experts to correlate, normalise, enrich, and sanitise collected data to produce real-time actionable intelligence. Financial institutions can use the information provided by FinTIP for their own incident response, security operations, threat hunting, vulnerability management and risk analysis. They can also access professional services for assistance on cyber incident remediation and analysis of threats. Diagram 1.4 describes the key features of FinTIP.

Improving industry collaboration

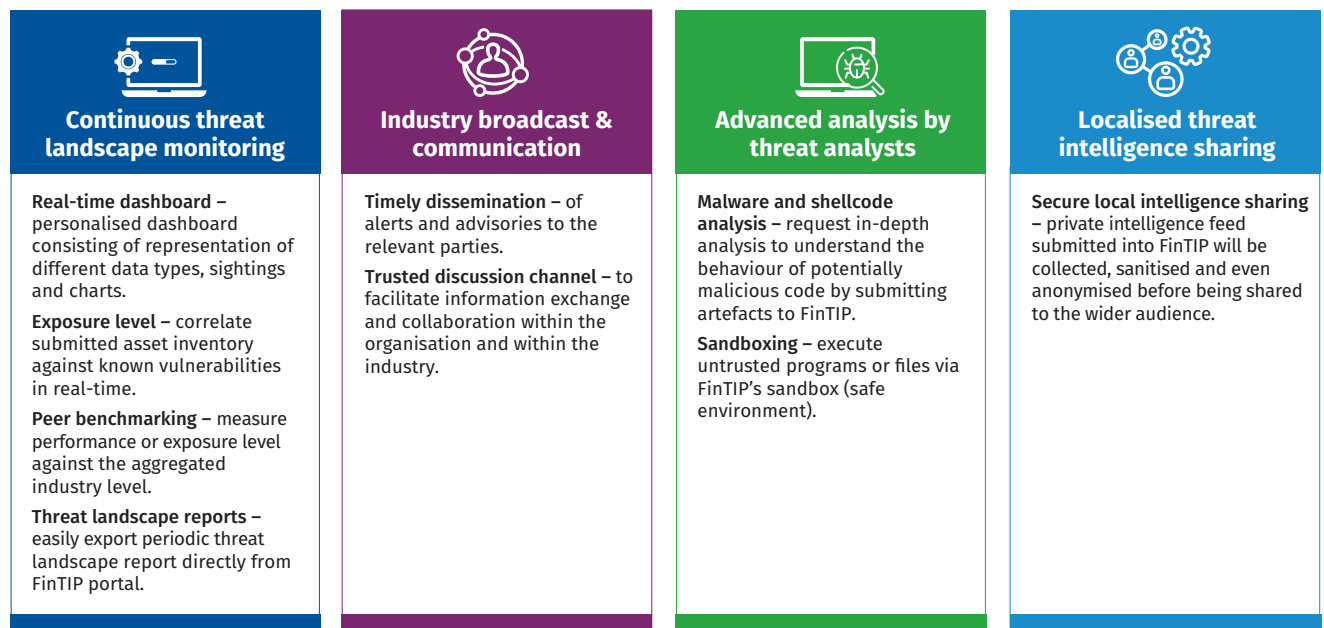
FinTIP also provides a secure platform for financial institutions and other stakeholders across the industry to exchange information on defensive measures taken and lessons learnt from cyber incidents. For example, financial institutions can participate in community-driven discussions to collaborate and learn from each other's experiences in dealing with common threats. Financial institutions can also obtain an objective understanding of their cyber risk performance or exposure level, benchmarked against industry peers.

Diagram 1.3: FinTIP Deployment Model



Source: Bank Negara Malaysia

Diagram 1.4: FinTIP Features



Source: Bank Negara Malaysia

Enhancing cyber situational awareness

FinTIP increases overall industry cyber situational awareness by providing a more holistic view of threat actors targeting the local industry and helps financial institutions better understand the threat actors' tactics, techniques, and procedures. Data collected on threats and IT vulnerabilities are mapped to the IT assets used within the industry to provide an accurate localised cyber exposure level. This information will enable the Bank to pinpoint specific vulnerabilities and assess the potential system-wide impact of a cyber threat.

The reports produced by FinTIP are tactical, operational and strategic in nature to cater for a diverse audience. At the tactical level, technical reports provide granular data on cyber threat indicators which financial institutions can integrate into their cyber security tools to identify and mitigate cyber threats. At the operational level, financial institutions will be able to track attack campaigns and undertake actor profiling to gain a better understanding of the threat actors that target the financial institution. This will enable financial institutions to prioritise and perform more targeted cyber security operations. Finally, at the strategic level, financial institutions can use FinTIP data to inform business decisions by better understanding how global and local events, and the evolving threat landscape affect a financial institution's cyber security posture.

FinTIP complements existing multi-layered defence strategies

FinTIP reflects a shared responsibility for cyber security by facilitating a whole-of-industry approach towards enhancing cyber resilience. It is important to note that FinTIP serves to complement and augment, rather than replace, an individual institution's own existing cyber threat intelligence services. The Bank expects FinTIP to support deeper and faster information sharing and collaboration which in turn, will strengthen the financial industry's response capabilities to the evolving cyber threats affecting the financial system.

