BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Annual Report 2022

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BANK NEGARA MALAYSIA
CENTRAL BANK OF MALAYSIA

Statutory Requirements

In accordance with section 13 of the Central Bank of Malaysia Act 2009, Bank Negara Malaysia hereby publishes and has transmitted to the Minister of Finance a copy of this Annual Report 2022 together with a copy of its Financial Statements for the year ended 31 December 2022, which have been examined and certified by the Auditor-General. The Financial Statements will also be published in the Gazette.

For the purposes of section 115 of the Development Financial Institutions Act 2002, the annual report on the administration of the Development Financial Institutions Act 2002 and other related matters for the year ended 31 December 2022 is incorporated in this Annual Report.

Nor Shamsiah Yunus
Chairperson
Board of Directors
29 March 2023

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Nor Shamsiah Yunus
Governor, Bank Negara Malaysia

Foreword

We started the year with the worst of the pandemic behind us. But even amid expectations of a rebound in the global economy, the world was swiftly reminded of the uncertainties in the road ahead. The rapid escalation of the conflict in Ukraine, and the global headwinds that came after, presented new challenges for sustaining economic recovery. Notably, with inflation returning as a top-of-mind concern for policymakers all around the world, we saw aggressive and unprecedented monetary policy tightening in developed economies.

The Bank's priority in the past year was therefore to ensure that monetary and financial conditions remained supportive of a firm path to recovery for the Malaysian economy. This meant recalibrating monetary policy in a gradual and measured manner to maintain price stability and thus preserve sustainable growth. With interest rates reduced to an all-time low in response to the unprecedented economic shocks from the pandemic, avoiding a 'too low for too long' interest rate environment was important to mitigate a build-up of future risks. This is especially when economic growth has been sustained and signs of demand-driven price pressures have started to emerge. Against this backdrop, the Bank has remained focused in its policy response on managing risks that could undermine the long-term health of the economy and the well-being of the people.

The Bank also continued to ensure that the financial sector remains a source of strength for the Malaysian economy. Despite a highly challenging environment, the banking system continues to be well capitalised. Strong capital and liquidity buffers have enabled banks to continue lending to the economy, while extending help to borrowers who are still struggling. These buffers have remained critical to preserve banks' resilience, as well as public and investor confidence – including during the most recent episodes of banking stress experienced in some advanced economies. Exceptional policy measures introduced during the pandemic crisis have also been largely withdrawn to reinforce the resilience of banks, without disrupting intermediation activities.

In the face of heightened market volatility, the Bank also remained focused on preserving orderly market conditions and ensuring that financial markets continued to absorb – rather than amplify – shocks. To this end, the Bank ensured that there was sufficient liquidity in the financial markets and took measures to mitigate excessive volatility that would have disrupted trade and investment activities. We also continued efforts to strengthen and expand our policy toolkit. These include working in close cooperation with the regional and global central banking community to enhance cross-border liquidity arrangements.

Malaysia's economic recovery has now been firmly established. But we cannot rest on our laurels as we focus on ensuring sustainable growth going forward. World events over the past few years are an important reminder that we need to plan for surprises and be ready to respond accordingly. We anticipate that the environment moving forward will remain challenging as we continue to face risks from increasing geopolitical conflict, elevated price pressures and tighter financial conditions. In navigating these developments, our foremost focus will be on ensuring the right calibration, timing, and mix of policies that promote monetary and financial stability conducive for sustainable economic growth. Our policy response will also need to work together with, and take account of, other national and global policies.

The past few years are also a reminder to seize opportunities to institute reforms that will put the Malaysian economy on a stronger footing. The Malaysian economy has weathered many storms in the past. How well we can weather future ones will depend on the actions we take today to strengthen our resilience and rebuild buffers that were drawn down during the pandemic. As economic adviser to the Government, we will continue to provide our professional advice on the country's key economic policy reforms. And we continue to maintain a strong focus on how we can advance longer-term measures to further develop the financial sector. In this report, we outline key milestones and developments that bring us closer to the vision set out in the Financial Sector Blueprint 2022-2026.

In line with the Financial Sector Blueprint, we will continue to develop and promote a sound and progressive financial system that delivers 'finance for all', 'finance for transformation' and 'finance for sustainability'. To this end, we started to lay down the groundwork to license digital insurers and takaful operators. This follows closely after the approval of new digital banks that are in the process of gearing up to commence operations sometime before mid-2024. We also continue to advance efforts on multiple fronts to promote the responsible and safe use of e-payments, including cross-border payments.

In the area of sustainability, we are focused – in line with our mandates – on strengthening the resilience of financial institutions to manage climate-related risks. In parallel, we are advancing efforts in cooperation with the financial industry, key Government agencies and institutional investors through JC3 to scale up capacity to finance activities that mitigate against or adapt to climate risks.

We also continue to work closely with the Government and other relevant stakeholders to improve people's financial well-being. We are actively supporting the Government's initiative to strengthen oversight arrangements for consumer credit activities through the enactment of the Consumer Credit Act. We are making further headway in piloting and scaling up social finance solutions. And we are progressively rolling out key reforms in the motor, fire and medical/health insurance sector.

At the same time, we are doubling down on efforts to ensure emerging cyber threats are well-managed. For 2022, working closely with the Government and financial industry, the Bank heightened efforts to combat online financial scams. A key initiative is to educate and enhance public awareness on ways to protect against scams. This will continue in 2023, and as with many challenges in the digital age, a whole-of-nation approach will be necessary for this endeavour to succeed.

Delivering all of this places significant demands on the Bank as an organisation. We are committed to providing a working environment that keeps our staff highly engaged to grow and thrive, so that they can be at their best. This has included the roll-out of a multi-year programme to promote and sustain a strong culture across all levels in the Bank. This complements our ongoing effort to future-proof the organisation, retain the right talent and to develop our people to prepare for the future. We also continue to devote significant resources to transforming our IT infrastructure to be fit-for-purpose and facilitative of collaboration and innovation.

The Bank's strong track record in delivering its mandates is a testament to the strength and dedication of our people. For this, on behalf of the Board and Management, I want to take this opportunity to express my deep and sincere gratitude to all Bank staff for their hard work, unwavering support and professionalism. It is because of our people that the Bank continues to perform to the high standards expected of us, and uphold the trust that is placed upon us by the public. I would also like to thank the Board of Directors for their invaluable support and incisive guidance in helping the Bank navigate through these challenging times.

2023 will mark another turning point for Malaysia as we rebuild and position for lasting prosperity. With the pandemic receding further into the rear-view mirror, it is critical that we stay the course in implementing reforms that will allow us to secure our future. The Bank will continue to do our part, by remaining laser focused on delivering our mandates with uncompromising standards of professionalism and integrity.

Nor Shamsiah Yunus

Our Role

Our Role

Our Role

Bank Negara Malaysia is Malaysia's central bank. Our principal objective is to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy. The Bank derives its mandate and powers from the Central Bank of Malaysia Act 2009 and other laws that it administers[1].

In our role to promote monetary stability, the Bank formulates and conducts monetary policy to keep inflation low and stable, while ensuring that it is supportive of sustainable economic growth. We are also mandated to promote an exchange rate regime consistent with the fundamentals of the economy.

To promote financial stability, the Bank regulates and supervises financial institutions to promote their safety and soundness. We oversee money and foreign exchange markets to promote their integrity and orderly functioning. We also exercise oversight over payment systems to foster safe, efficient and reliable payment systems and payment instruments. In addition, we regulate the conduct of financial institutions and intermediaries in order to provide appropriate protection to financial consumers.

The Bank plays a key role in promoting a progressive and inclusive financial system. This takes into account the changing needs of the Malaysian economy and its people, and the central role of finance in the nation's economic and social progress.

Our pursuit to develop and deepen both the conventional and Islamic financial system also recognises that a well-developed financial system is one that can help absorb shocks, and therefore contributes to the country's resilience.

The Bank carries out a number of other important functions. These include issuing currency, and holding and managing the country's foreign reserves. The Bank is also the financial adviser, banker and financial agent of the Government. Together with other government and law enforcement agencies, we play a role in helping to prevent the criminal abuse of financial services. Additionally, the Bank has been responding to climate risk, firstly through appropriate regulation and supervision of financial institutions, to support an orderly transition to a low-carbon economy; and secondly by embedding sustainable practices in our own operations.

In all the Bank does, it does in the best interest of the nation.

[1] Other key legislation includes the Financial Services Act 2013; Islamic Financial Services Act 2013; Development Financial Institutions Act 2002; Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001; Money Services Business Act 2011; and the Currency Act 2020.

Promoting Monetary Stability

The Bank's Monetary Policy Committee (MPC) formulates monetary policy autonomously to achieve price stability while giving due regard to economic developments. The MPC does this by setting the Overnight Policy Rate (OPR) based on its assessment of the outlook for inflation and economic growth in Malaysia.

Monetary Policy in 2022

In early 2022, the global economy was heavily affected by COVID-19 policy responses amid the emergence of new variants of concern. Countries had to employ strong measures to curb the spread of the disease, which in turn weighed on economic activity. However, by the first half of 2022, more effective pandemic management[1] enabled some economies to lift restrictions and reopen international borders. This led to improved labour market conditions and a rebound in economic activity and demand.

Notwithstanding these positive developments, the global recovery was hampered by several other factors during the year. These included rising global commodity cost pressures, the military conflict in Ukraine, and strict COVID-19 containment measures in China.[2] In particular, rising inflationary pressures emerged as a significant concern for many economies due to increased costs and stronger demand following economic reopening.

To manage high inflation, many central banks resorted to aggressive tightening of their monetary policy, with some increasing their policy rates quickly and by large magnitudes. As a result, global financial conditions tightened. Of significance, fast and large adjustments in the US interest rates and expectations of future hikes contributed to a strong US dollar. This appreciation of the US dollar subsequently affected other major and emerging market currencies, including the ringgit.

Even in the face of global challenges, Malaysia's economy continued to post a strong recovery. Domestic GDP grew by 8.7% in 2022 (2021: 3.1%). As COVID-19 restrictions were lifted, economic activities resumed. Labour market conditions and investment activities improved, further supporting domestic growth. The reopening of international borders[3] helped revive tourism activity. Continued policy support, such as the minimum wage increase[4] and cash transfers, provided an additional lift to the economy.

While the growth of the global economy was slower, exports activity remained resilient during the year. This was supported by strong demand for electrical and electronic (E&E) products and commodities. Despite tighter global financial conditions and higher volatility in the foreign exchange markets, Malaysia's strong external position[5] and sound financial institutions ensured continued smooth financial intermediation to support the economy.

Overall, Malaysia's economic recovery in 2022 was largely driven by stronger domestic demand as economic activity normalised. However, the pace of recovery varied across different economic sectors. While economic activity in export-oriented industries thrived, some sectors such as that of the leisure-

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1 These include progress in vaccination coverage, advancements in vaccine efficacy, and the availability of anti-viral treatments.
2 Of note, the military conflict in Ukraine led to a spike in commodity prices and temporary disruptions in the supply chain, which was also partly worsened by lockdowns in China.
3 Since 1 April 2022.
4 The monthly minimum wage was increased from RM1,200 to RM1,500 for companies with five or more employees effective 1 May 2022.
5 Malaysia's foreign currency assets were higher than the foreign currency liabilities.

related services remained below pre-pandemic levels. This was mostly due to tourist arrivals recovering only at a gradual pace during the year.

Headline inflation averaged higher in 2022 at 3.3% (2021: 2.5%). Underlying inflation, as measured by core inflation,[6] also rose, averaging at 3.0% (2021: 0.7%). The surge in global commodity prices and prolonged supply-related disruptions were key factors that resulted in cost-push inflationary pressures. The continued US dollar strength against the ringgit also led to higher import prices, which added to the cost pressures. While inflation was largely driven by these cost factors, the strengthened domestic demand following the economic reopening also contributed to the increasing inflationary pressures. However, upward pressures on prices were partly contained by domestic price controls, subsidies, and prevailing spare capacity in the economy.

As the Malaysian economy was on a firmer footing, the MPC[7] deemed that it was the right time to begin withdrawing excess monetary policy support. The MPC gradually increased the OPR through four 25 basis point adjustments at the May, July, September and November meetings. This resulted in a total increase of 100 basis points, bringing the OPR to 2.75% from a historical low of 1.75% in 2020.

In early 2022, domestic inflation was mainly driven by costs. However, as the year progressed and the economy recovered, the MPC observed some signs of demand-driven inflation. As such, the OPR increases were also aimed at pre-emptively mitigating the potential risk of excessive demand pushing up prices further. This was necessary to avoid excessive broad-based price pressures and unanchored inflation expectations.[8] Such a situation of high inflation is harmful to the economy. It erodes people's purchasing power and savings, especially affecting those in the lower-income group. High inflation is also detrimental for businesses as they face increased costs to produce goods and services, or lower sales due to reduced demand. These would then lead to slower economic activity and growth. If the MPC waited until high inflation became out of control before taking action, the OPR might need to be raised faster and by a larger amount. At the same time, the negative effects of high inflation would already be felt by all, particularly the lower income group. Together, these would be far more damaging to the economy. Overall, monetary policy remained accommodative and supportive of economic growth in 2022.

Following the OPR adjustments, interest rates in the wholesale and retail markets trended higher. In the retail market, returns to depositors and lending rates increased, broadly in line with the OPR increases. Throughout this period, the Bank's monetary operations focused on ensuring sufficient liquidity in the banking system,[9] including after the expiry of the Statutory Reserve Ratio (SRR) flexibility on 31 December 2022.[10] This enabled the orderly functioning of domestic financial markets and financial intermediation in the economy.

For borrowers, the impact of OPR increases on loan repayments depends on the type of loan. Existing fixed-rate loans (e.g., most car loans), which account for about 50% of the total number of household loan accounts,[11] were unaffected, while borrowers with floating-rate loans (mainly housing loans) faced higher monthly instalments. Interest rates for new loans also increased in line with the OPR adjustments.

[6] Core inflation is computed by excluding price-volatile items (e.g., fresh meat, vegetables and eggs) and price-administered items (e.g., electricity, road tolls and sugar).

[7] The MPC meets six times a year to decide on monetary policy. More information on Malaysia's monetary policy and the MPC can be found in the 'Governance' section of this report and in the 'Monetary Stability' section of the Bank's website (https://www.bnm.gov.my/monetary-stability).

[8] Inflation expectations can influence price- and wage-setting behaviours which could affect actual inflation outcomes. For example, when expectations are unanchored in a high inflation environment, firms would expect prices to keep rising, thus leading them to increase the prices of goods and services at a faster rate. At the same time, workers may demand higher wages due to their expected loss of purchasing power. As a result, these behaviours can further contribute to higher actual inflation, making it more challenging for the central bank to manage the inflationary pressures.

[9] The Bank conducts monetary operations using a range of instruments. More information on the various instruments used can be found in the 'Monetary Operations' section of the Bank's website (https://www.bnm.gov.my/web/guest/overview).

[10] Banking institutions were granted the flexibility to use the Malaysian Government Securities (MGS) and Malaysian Government Investment Issues (MGII) to fully meet SRR compliance from 16 May 2020 to 31 December 2022. This was to provide sustained liquidity support at the onset of the pandemic and during the economic recovery.

[11] As at end-December 2022.

Diagram 1: 2022 Key Domestic Figures at a Glance

Real GDP grew by
8.7%
(2021: 3.1%)

Headline inflation averaged at
3.3%
(2021: 2.5%)

Overnight Policy Rate (OPR) increased to
2.75%
from a historical low of 1.75%

Source: Bank Negara Malaysia and Department of Statistics, Malaysia

The Ringgit Exchange Rate

Like most currencies, the ringgit depreciated against the US dollar in 2022. The aggressive policy rate hikes in the US[12] and concerns over a weakening global growth outlook led to investors preferring US dollar-denominated assets. However, the ringgit was relatively stable compared against the currencies of Malaysia's major trade partners, as assessed using the nominal effective exchange rate (NEER). The NEER recorded a marginal appreciation of 0.05% for 2022. This helped preserve our competitiveness.

Malaysia adopts a flexible exchange rate regime. This flexibility is critical to help the Malaysian economy adjust to global economic and financial shocks. Movements in the ringgit exchange rate, whether it is an appreciation or depreciation, will guide businesses and households to adjust their consumption and investment decisions optimally.[13] This ultimately benefits the economy in the long run.

While the value of the ringgit is determined by the market, the Bank's role is to ensure the orderly functioning of the ringgit exchange rate market.[14] In other words, we carry out foreign exchange operations so that there are no sudden or excessive swings in the ringgit exchange rate that could disrupt economic activity (such as exports and investments). We do so by stepping into the market to buy and sell ringgit. This ensures sufficient two-way liquidity in the ringgit exchange rate market during periods of market stress – for example, during bouts of financial market volatility when the US Federal Reserve increased the pace of its monetary policy tightening in 2022. The Bank also continues to deepen the foreign exchange market, which promotes access to hedging instruments for businesses to better manage their foreign exchange risks.[15]

Analysis and Research

Throughout the year, our policy research and analytical work focused on assessing the resilience of the economic recovery and the rising inflationary pressures. On economic resilience, we updated our assessments on domestic labour market

[12] Amid higher inflationary pressures, the US Federal Reserve had sharply raised the federal funds rate cumulatively by 425 basis points, to its highest level in 15 years of between 4.25% to 4.50% by the end of 2022.

[13] For example, when the exchange rate depreciates, domestic goods sold abroad (exports) become cheaper relative to goods from abroad (imports). This will incentivise an increase in exports relative to imports, thereby improving the trade balance. Consequently, these will lead to an increase in consumption, investment and inflation in the domestic economy. The opposite applies for an appreciation in the exchange rate.

[14] More information on the ringgit can be found in the 'Ringgit Exchange Rate Policy' section of the Bank's website (https://www.bnm.gov.my/monetary-stability/ringgit).

[15] More information on financial market development initiatives can be found in the 'Market Development Initiatives' section of the Bank's website (https://www.bnm.gov.my/committees/fmc#devt).

recovery and the strength of private consumption. This included analysing the extent of slack (unmet demand for employment), determinants of labour productivity and the impact of policy support on consumption.[16] Additionally, we analysed how external factors could affect Malaysia's highly open economy, conducting scenario analyses to measure the potential impact on financial conditions, inflation and GDP. Our assessment also included a thorough examination of the channels through which changes in global commodity prices could potentially influence domestic inflation and the potential risks of unanchored inflation expectations in Malaysia.[17] The impact of the exchange rate on the economy and inflation was given special emphasis in our policy surveillance and research.[18] We also considered the impact of the global financial market volatility on domestic financial intermediation and the resilience of the banking system.

Amid the OPR increases, the Bank regularly evaluated the transmission of higher interest rates to domestic financial markets, the banking system, the economy and inflation. This comprehensive evaluation encompassed the effects on credit and financing, as well as consumption and investment activities.

The Bank contributed to a number of Government policy groups, focusing on critical economic priorities, such as inflation, investment, labour, and social safety nets. For instance, we provided insights and policy advice on various cost of living initiatives from the macroeconomic perspective. In addition, the Bank contributed to the formulation of the Fiscal Responsibility Act, which ultimately serves towards ensuring the nation's overall fiscal soundness. We also provided technical assistance in COVID-19 vaccine effectiveness research to support the Government's vaccination and epidemic policies. As a result, this contributed towards a smooth endemic transition and a sustained economic recovery.

Our research on reinvigorating investment in Malaysia culminated in the launch of the New Investment Policy (NIP) based on the National Investment Aspirations.[19] The NIP serves as a forward-looking framework for Malaysia to adapt to changes in the global economic landscape and drive investment in future growth sectors. Our policy advocacy work also prioritised the green agenda. This includes providing recommendations for the National Energy Policy and forging strategic partnerships to promote co-innovation and investment in clean technology.[20] These align with our broader goal of creating new growth opportunities for the economy while mitigating the transition risks of climate change.

The Bank also contributed to enhancing Malaysia's social protection landscape.[21] Our efforts included proposing improvements to the social safety nets (SSN) framework,[22] advocating for better access to insurance options (e.g., Perlindungan Tenang), and policy interventions aimed at rebuilding retirement savings.[23] To improve job opportunities and income prospects, we proposed viable models for personalised training programmes. We also advocated for upward mobility and lifelong learning for all working-age adults, including by better connecting social assistance and insurance programmes with active labour market policies (ALMPs).[24] These recommendations are geared towards building a more comprehensive and inclusive social protection system for all Malaysians.

Communication and Outreach

In 2022, the Bank stepped up efforts to enhance our monetary policy communications. We endeavoured to provide the public with deeper insights into our monetary policy decisions and widened our engagement channels with different stakeholders using targeted forms of content. This involved making information more accessible and increasing

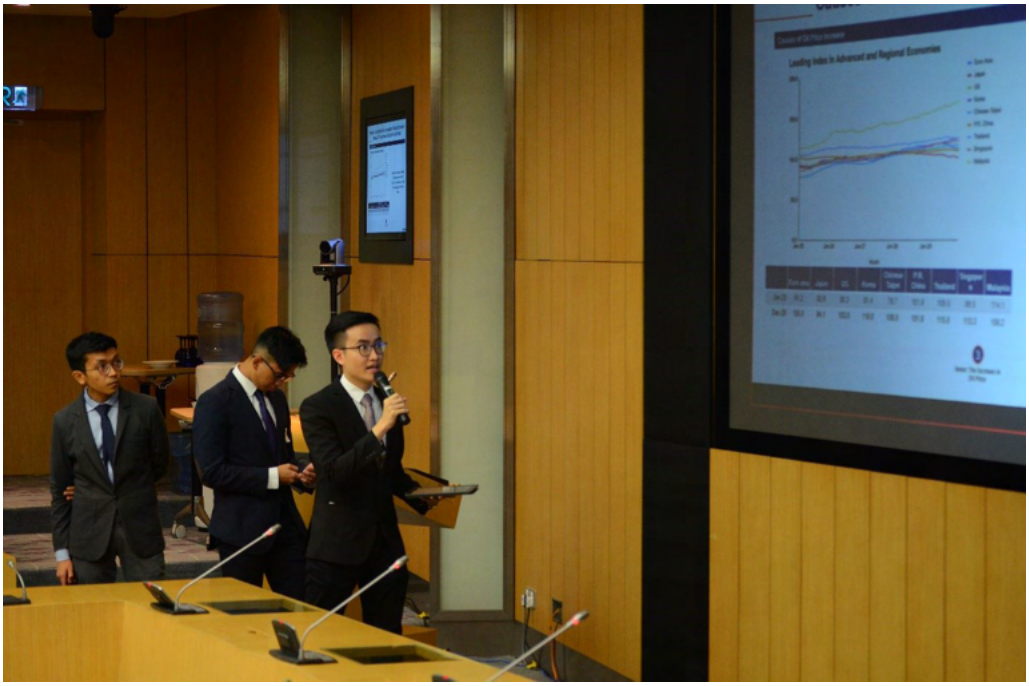
[16] Further discussion on assessing slack and tightness in the labour market can be found in the BNM Economic and Monetary Review 2022 Box Article titled 'Analytical Approaches to Assessing Labour Market Conditions and Implications to Monetary Policy'.
[17] More information can be found in the BNM 3Q 2022 Quarterly Bulletin Box Article titled 'Global Commodity Price Trends, Inflation Dynamics, and Policy Responses: The Case of Malaysia'.
[18] Further discussion on the ringgit exchange rate can be found in the Box Article titled 'The Exchange Rate and the Malaysian Economy' in this report.
[19] The NIP was launched on 6 October 2022.
[20] Clean technology refers to areas such as electric vehicles, agritech, hydrogen, as well as carbon capture, utilisation and storage (CCUS).
[21] Social protection serves as an important macroeconomic stabilisation tool, particularly by providing support to vulnerable groups.
[22] Enhancements to the SSN framework include consolidating overlapping assistances and strengthening the targeting mechanism (e.g., to identify recipients for targeted assistance). Together, these would greatly enhance the ability of SSN policies to uplift and reinforce economic security for vulnerable groups.
[23] More information can be found in the BNM Economic and Monetary Review 2022 Box Article titled 'Rebuilding Retirement Savings and Financial Safety Nets in Malaysia'.
[24] Examples of ALMPs include training, upskilling, apprenticeship opportunities and job placement services.

interactions with the public, analysts, media and Government representatives.[25]

A key initiative was the introduction of the Monetary Policy Statement (MPS) Snapshot to accompany the statement itself. The MPS Snapshot is a summary of the MPS aimed at improving public outreach by cutting through technical terms, and describing OPR decisions more simply and intuitively. A list of frequently asked questions (FAQs) on monetary policy was also made available on the Bank's website.[26] These initiatives align with our long-term goal of improving monetary policy education and outreach. At the same time, they also helped to address public concerns surrounding OPR decisions during the year.

This year also marked the third edition of the Tun Ismail Ali Chair (TIAC) Monetary Policy Challenge.[27] In this challenge, undergraduate students from universities in Malaysia were given the unique opportunity to simulate the role of the MPC. Participants were tasked to formulate monetary policy for a given economy based on their assessment of economic and financial market conditions. To further engage with university students, we also conducted the inaugural TIAC Talks webinar, which centred on sharing valuable insights on monetary and financial economics issues. This year's focus was on inflation and cost of living concerns.

The Bank continued to collaborate with academia through the Visiting Research Fellowship (VRF) Programme.[28] This programme allowed us to expand our research on monetary and financial economics by producing joint publications, with the first working paper published in October 2022.[29] Through initiatives such as the VRF programme, we aim to promote a better understanding of the complex issues that underpin monetary policy decisions. Collaboration with experts from academia also allowed us to tap into a broader range of perspectives and insights. Ultimately, this enhances our ability to make informed decisions that benefit the wider economy.



These three undergraduates from the University of Nottingham Malaysia emerged as champions of the third TIAC Monetary Policy Challenge in 2022.

[25] More information on the Bank's public engagements throughout the year can be found in the 'Engaging Malaysians' chapter of this report.
[26] https://www.bnm.gov.my/monetary-stability.
[27] The Tun Ismail Ali Chair was established by the Bank on 28 August 2000 to encourage and stimulate research, commentary, and public interaction on issues regarding monetary and financial policies that affect Malaysia and the rest of the world. The TIAC Challenge aims to promote interest in monetary and public policies among university students. More information on the TIAC can be found in its website (https://tunismailalichair.my/).
[28] The programme was launched in October 2020.
[29] The joint research publication titled 'Fiscal multiplier in Malaysia: Concept, empirical assessment and policy implication' is available on the Bank's website (https://www.bnm.gov.my/documents/20124/826852/lau_maryam_fahrulradzi_helmi_2022.pdf).

Assistant Governor Fraziali Ismail, Professor Dr. Yeah Kim Leng (Professor of Economics, Sunway University) and Shakira Teh Sharifuddin (Senior Economist Malaysia, World Bank) evaluating the students' presentations for the finals of the TIAC Monetary Policy Challenge in 2022.

The MPS Snapshot summarising the March 2023 MPC decision.

Going Forward

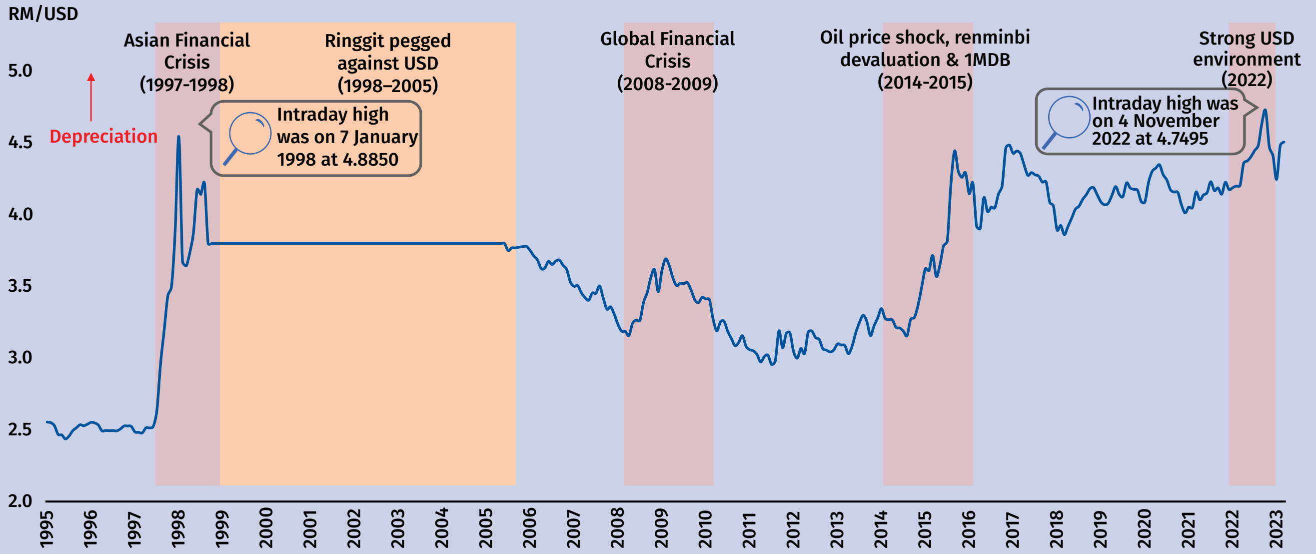
While Malaysia's economic growth had exceeded its pre-pandemic level in 2022, the economy is expected to face headwinds in the coming year, particularly from global developments. Conditions will continue to evolve and uncertainties remain surrounding global growth and global financial markets amid monetary policy tightening in major economies and the recent banking sector issues, geopolitical conflicts and supply chain disruptions. Amid these challenges, the Bank remains committed to ensuring price stability in support of sustainable domestic economic growth. Further normalisation to the degree of monetary policy accommodation would be informed by the evolving conditions and their implications to the domestic inflation and growth outlook. Monetary operations will continue to ensure sufficient liquidity in the foreign exchange, money and Government bond markets. They will also complement our other policies to ensure the smooth functioning of domestic financial markets and financial intermediation.

Now that the worst of the pandemic crisis is behind us, we must focus on restoring our economic strength and foundation to prepare for any future shocks. This would entail rebuilding policy space, and the depleted buffers of households and businesses through future-proofing our social protection coverage, encouraging savings, and strengthening the agility and innovation of businesses. The Bank will continue to work with our stakeholders on relevant policy measures, particularly structural reforms, to strengthen Malaysia's overall economic resilience for the future.

The Exchange Rate and the Malaysian Economy

In 2022, the ringgit exchange rate experienced a period of sustained depreciation against the US dollar. While small movements in the ringgit exchange rate are common, large fluctuations in the level can create lasting impact for businesses, households and the economy. As the ringgit against the US dollar hovered close to levels last experienced during the Asian Financial Crisis (AFC) (Figure 1), this became a concern. There were even some calls for the ringgit to be pegged to prevent it from falling further.

Figure 1: Performance of the Ringgit against the US Dollar



Note:
1. RM/USD is as at end-month, up to 20 March 2023.
2. The RM/USD exchange rate used here is the average of buying and selling rates at noon in the Kuala Lumpur Interbank Foreign Exchange Market.

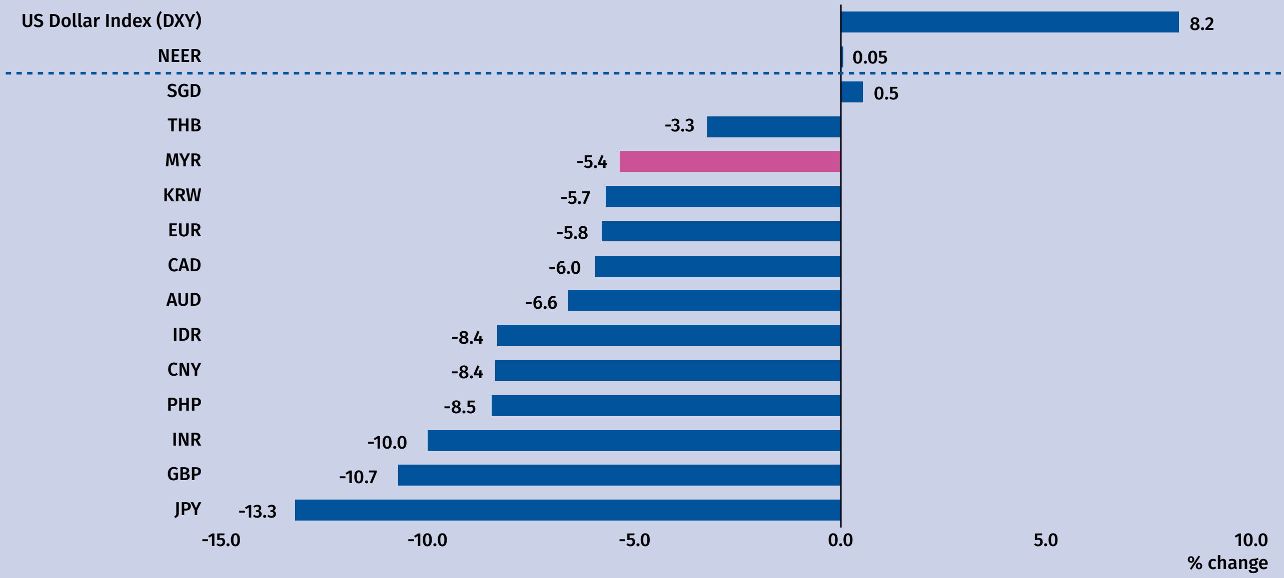
Source: Bank Negara Malaysia and Bloomberg

To understand the role of the exchange rate in the Malaysian economy, it is worth noting that movements in the exchange rate will influence households' and businesses' decisions, and thus in aggregate, will impact economic activity. For a country with a flexible exchange rate like Malaysia, the ringgit can periodically appreciate and depreciate. Over the longer term, the exchange rate should be determined by our economic fundamentals relative to key trading partners. In a financially integrated world, short-term movements in the exchange rate are also strongly influenced by cross-border financial flows and investor risk sentiments, which are often affected by global developments and are not necessarily reflective of our country's economic fundamentals.

This was certainly the case in 2022 when the US Federal Reserve raised its policy interest rate aggressively by 425 basis points to a target range of 4.25-4.50% to address inflation.[1] The higher returns on US financial assets raised demand for these assets and led to a period of sustained US dollar appreciation. Consequently, other currencies including major currencies and the ringgit, depreciated against the US dollar during the year (Figure 2). This depreciation was a global trend and not generally indicative of any fundamental weaknesses in the affected economies within the region and globally.

[1] Since the start of 2023, the US Federal Reserve has continued to increase its policy interest rate by another 50 basis points to a target range of 4.75-5.00% (as at end-March 2023).

Figure 2: Performance of Major and Regional Currencies against the US Dollar in 2022



Note:
1. The RM/USD exchange rate used for calculation here is the average of buying and selling rates at noon in the Kuala Lumpur Interbank Foreign Exchange Market.
2. NEER refers to the ringgit nominal effective exchange rate. It is an index measuring ringgit's performance against currencies of Malaysia's major trading partners.

Source: Bank Negara Malaysia and Bloomberg

With this in mind, the effects of the exchange rate on the Malaysian economy are not only determined by developments in the bilateral exchange rate against the US dollar. As a trading nation that also has key investment relationships with many countries, assessments should consider ringgit movements against our major trading partners. This would provide insights on whether Malaysia's relative competitiveness has been affected by movements in the exchange rate.[2] A common gauge for this is the nominal effective exchange rate (NEER).[3] In 2022, despite the ringgit's sharp depreciation against the US dollar, Malaysia's NEER was relatively stable (Figure 2). As the currencies of key trading partners were similarly affected as the ringgit, Malaysia's relative competitiveness remained unchanged.

Whether the exchange rate appreciates or depreciates, there will always be winners and losers in the domestic economy. A depreciation in the ringgit hurts those who consume imported goods and services, and if sustained, can lead to a rise in the overall cost of living. At the same time, a weak ringgit could increase exporters' earnings. On the other hand, when the ringgit appreciates, it benefits those who import goods, services, and travel abroad, but hurts exporters and the domestic tourism industry. When these exchange rate movements occur, it is important for the adjustments to be orderly to ensure that economic activity can continue. The focus of the country's exchange rate regime should not be on picking sectoral winners or losers. Instead, the goal is to ensure long-term benefits for the overall economy.

Malaysia's exchange rate regime and financial system have evolved over the years to serve the growing needs of an increasingly market-oriented domestic economy. In this regard, the current flexible exchange rate regime has brought benefits to Malaysian businesses and households. As an external price, the exchange rate conveys an important signal to businesses to guide them towards sustainable investment opportunities and to allocate their resources optimally. Similarly, for households, the exchange rate helps to inform them of their consumption choices such as purchasing more or less imported goods, as well as travelling abroad or locally.

[2] The exchange rate is just one of many other factors that can affect Malaysia's relative competitiveness. This includes structural factors such as position within the global supply chain, as well as the domestic business and investment climate.
[3] NEER refers to the ringgit nominal effective exchange rate. It is an index measuring the ringgit's performance against currencies of Malaysia's major trading partners.

Crucially, the flexible exchange rate regime provides Malaysia with the flexibility to naturally adjust to international economic and financial shocks. For instance, a ringgit depreciation can help to cushion the domestic economy from external shocks such as a sudden decline in global commodity prices. An example would be Malaysia's experience during the oil price shock in 2015. Brent crude oil prices declined by 68% from USD115 per barrel on 19 June 2014 to USD37 per barrel on 22 December 2015. Given Malaysia's position as a net oil exporter, the domestic oil and gas sector was hit hard by this situation, leading to restructuring exercises within the industry. In fact, the oil and gas sector went through considerable structural changes, involving the rightsizing of many industry players. Nevertheless, the diversified structure of the Malaysian economy helped to limit the negative spillovers to the rest of the economy. Specifically, the ringgit's depreciation also supported our non-commodity sectors' competitive standing. These sectors provided support to employment and overall economic growth during that period.

In 2022, the flexible exchange rate regime similarly helped the Malaysian economy to adjust to shifting external conditions without disrupting our economic recovery. Despite a major external shock in the form of fast and sizeable adjustments of interest rates in the US which led to the rapid appreciation of the US dollar against most currencies, Malaysia's competitiveness was relatively unaffected. The domestic economy remained on its recovery path, registering a growth rate of 8.7% for the year.

It is recognised that the depreciation in the exchange rate did lead to higher import costs. The pass-through to domestic inflation was most pronounced for directly imported fresh food items, such as beef and selected vegetables. As food items tend to make up a larger share of the consumption basket among vulnerable groups, this led to cost-of-living concerns. To some extent, domestic price controls and subsidies on fuel prices, have helped to contain the broader impact of an exchange rate depreciation on inflation.

Nevertheless, a highly volatile exchange rate can itself be a source of vulnerability for the domestic economy. Large swings in the exchange rate within a very short time can exacerbate uncertainties and cause individuals and firms to delay their decisions to consume and invest. If this is prolonged, it could pose risks to the longer-term domestic economic outlook. To mitigate such risks, Bank Negara Malaysia (the Bank) undertakes foreign exchange operations[4] to stem excessive volatility and maintain orderly market conditions.

The flexible exchange rate has also contributed to making domestic markets more open and attractive to global investors. With greater financial openness, this also means that domestic markets are now more susceptible to global financial developments. Spillovers, however, have been contained due to two main factors. First, is the presence of a large domestic institutional investor base comprising among others, banks, pension funds and insurance institutions, to facilitate foreign investment flows. Over the years, this has mitigated outsized adjustments in domestic asset prices. In turn, this has helped to preserve and support returns on household savings managed by these institutions. Secondly, the domestic hedging market has also grown over the years to insulate firms from unanticipated moves in the exchange rate, leading to lower external vulnerabilities.

The rapid and sizeable depreciation of the ringgit against the US dollar in 2022 led to some calls for the ringgit to be re-pegged to the US dollar, similar to the policy undertaken during the AFC. Would this have been the right policy move? Using a medical analogy, it is important to properly diagnose the problem before prescribing the treatment. Just as the right type and dosage of medication must be chosen to address an identified ailment, it is important to pinpoint the root cause of an economic issue before determining a solution. Even if two patients present the same symptoms, the underlying cause may not be the same; thus, the course of treatment can differ. Furthermore, a good physician must ensure that the treatment does not worsen the patient's condition.

During the AFC, the Malaysian economy and financial system ran into deep problems when the balance sheets of banks, firms, and households were severely affected by the rapid depreciation of the ringgit and valuation losses in the domestic equity market. As part of the immediate policy measures, the ringgit was pegged to the US dollar at RM3.8000 alongside the introduction of selective exchange controls. These measures worked to

[4] Foreign exchange operations by the central bank is the act of maintaining orderly market conditions in the domestic foreign exchange (FX) market by managing liquidity via buying or selling foreign and domestic currency with counterparties such as commercial banks.

provide banks and businesses with a stable external environment and space to strengthen their balance sheets. However, things are different today (Table 1). Reforms and policy measures have since been implemented to reduce Malaysia's external vulnerabilities. Businesses' and banks' balance sheets are much more resilient now than they were back then. Domestic financial markets are also much more developed and capable of withstanding external financial shocks without affecting banks' capacity to support economic activity.

Table 1: Comparison of Economic Fundamentals

	AFC (1997-98)	2022
RM/USD (annual % change)	-47%[1]	-5.4%
Real GDP (annual % change)	-7.4%[2]	8.7%
Net international investment position (IIP, end-year)	-RM 137.6 billion[3]	RM 63.0 billion
International reserves (end-year)	USD 21.7 billion[4]	USD 114.6 billion
International reserves coverage of short-term external debt[6]	1.4 times[4]	1.0 time
Current account (annual)	-RM 16.7 billion[4]	RM 47.2 billion
Banking system gross impairment loans ratio (% of total loans)	18.6%[2]	1.7%
Government foreign currency debt (% of total Government debt)	19.1%[5]	2.7%

[1] From 10 July 1997 to 7 January 1998 [2] 1998 [3] 2001 [4] 1997 [5] 2000 [6] In 2014, Malaysia's external debt was redefined. Specifically on short-term external debt, the new definition included 1) inter-bank foreign currency borrowing, 2) inter-company foreign currency borrowing, 3) other foreign currency loans which include non-related company borrowing, 4) trade credits, 5) non-resident holdings of domestic money market instruments, 6) currency and deposits and 7) other liabilities (IMF allocation of SDRs, and liabilities of pension funds and life insurance companies to non-residents). By comparison, the previous definition of short-term external debt only included items 1) to 3). For more information, please refer to 1Q 2014 Quarterly Bulletin Box Article on 'The Redefinition of External Debt'.

Note: The RM/USD exchange rate used here is the average of buying and selling rates at noon in the Kuala Lumpur Interbank Foreign Exchange Market.

Source: Bank Negara Malaysia, Ministry of Finance Malaysia and Department of Statistics, Malaysia

Introducing and maintaining a peg today in the same way that was done during the AFC would require implementation of capital controls on financial flows. Without capital controls, such an exchange rate regime would require the Overnight Policy Rate (OPR) to match the rise in interest rate of the country to which the ringgit is pegged. This being the US dollar, the OPR would need to be raised by 475 basis points (more than four times higher than the cumulative 100 basis points hike) to match the rise in the federal funds rate. This will constrain the economy much more due to significantly higher costs of borrowing. In addition, a significantly higher amount of international reserves would be needed to maintain the credibility of the peg as defence against speculators.[5] Besides that, maintaining large foreign exchange reserves can incur higher opportunity costs as these assets are typically invested in highly liquid but lower yielding financial assets.

Selective exchange controls were needed and worked during the AFC due to the circumstances at the time.[6] The implementation of selective exchange controls during the AFC was targeted at stabilising short-term capital flows and have since been liberalised. More importantly, the controls allowed us to implement the necessary reforms to strengthen the banking system and the corporate sector. Heeding to calls to re-peg every time the ringgit depreciates could mean switching capital controls on and off. This would create a highly unstable and unpredictable environment for investors and businesses. For international investors, this could deter them from choosing Malaysia as their preferred investment destination. In the long run, this could hinder investments, innovation as well as the growth potential of the domestic economy. Eventually, this would come at the expense of future economic productivity, and lead to significant welfare losses (Forbes, 2007; Gadanecz and Mehrotra, 2013).

[5] If the stock of international reserves is assessed to be insufficient to maintain the exchange rate at the pegged level, it could force the central bank to devalue its currency during times of financial market stress. The sharp adjustments and its impact to sentiments could be more detrimental to the economy compared to orderly exchange rate adjustments under a flexible exchange rate regime.

[6] The implementation of selective exchange controls was intended to eliminate access to currency speculators and stabilise short-term capital flow movements. As such, the controls required capital inflows to remain in the country for a minimum period of 12 months. Importantly, controls were not imposed on current account transactions, repatriation of income from portfolio investment and other forms of ringgit assets and foreign direct investment flows.

Given Malaysia's flexible exchange rate regime, fluctuations in the ringgit should be expected to occur from time to time. In fact, since reaching a peak of RM4.7477 on 4 November 2022, the ringgit did rebound to reach RM4.2435 on 30 January 2023.[7] As challenges in the global economy continue to evolve, US dollar developments are likely to continue to be the main factor affecting the ringgit exchange rate. Our financial system has held up well throughout this period and continued to facilitate intermediation to support the broader economy. Reflecting on the events of the year, the Bank will continue to proactively monitor developments and ensure that our economy continues to be served by an exchange rate regime that supports our mandate to achieve monetary and financial stability conducive for sustainable growth of the Malaysia economy.

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Forbes, K. J. (2007). The microeconomic evidence on capital controls: no free lunch. In *Capital Controls and Capital Flows in Emerging Economies: Policies, Practices, and Consequences* (pp. 171-202). University of Chicago Press.

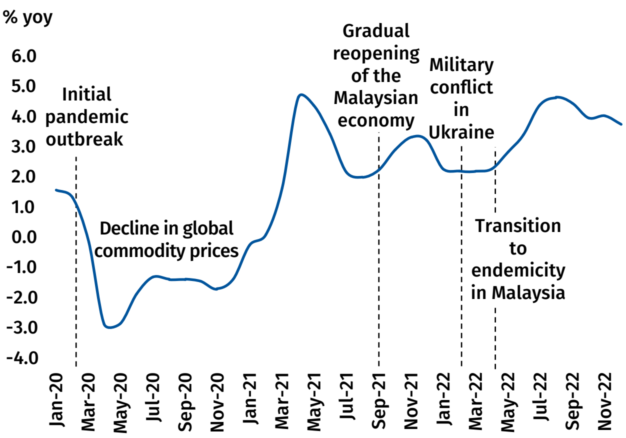
Gadanecz, B., & Mehrotra, A. N. (2013). The exchange rate, real economy and financial markets. *BIS paper*, (73b).

[7] These RM/USD rates are as of end-day.

Inflation: Its evolution, two years after the pandemic

1 **Over the past two years, consumer price developments shifted from being disinflationary to inflationary**

Chart 1: Headline Inflation



Source: Department of Statistics, Malaysia and Bank Negara Malaysia assessments

2 **In particular, the COVID-19 pandemic led to changing demand and supply dynamics**

Chart 2: Pandemic-related Economic Shocks

Demand shocks	▼ Movement restrictions ▼ Job and income losses ▲ Pent-up demand following reopening of the economy ▲ Pandemic-related policy support
Supply shocks	▲ Disruption to global value chains and shortages to imported inputs ▲ Port closures and higher freight costs ▲ Pandemic SOP costs

Legend:
▲ Upward impact to inflation
▼ Downward impact to inflation

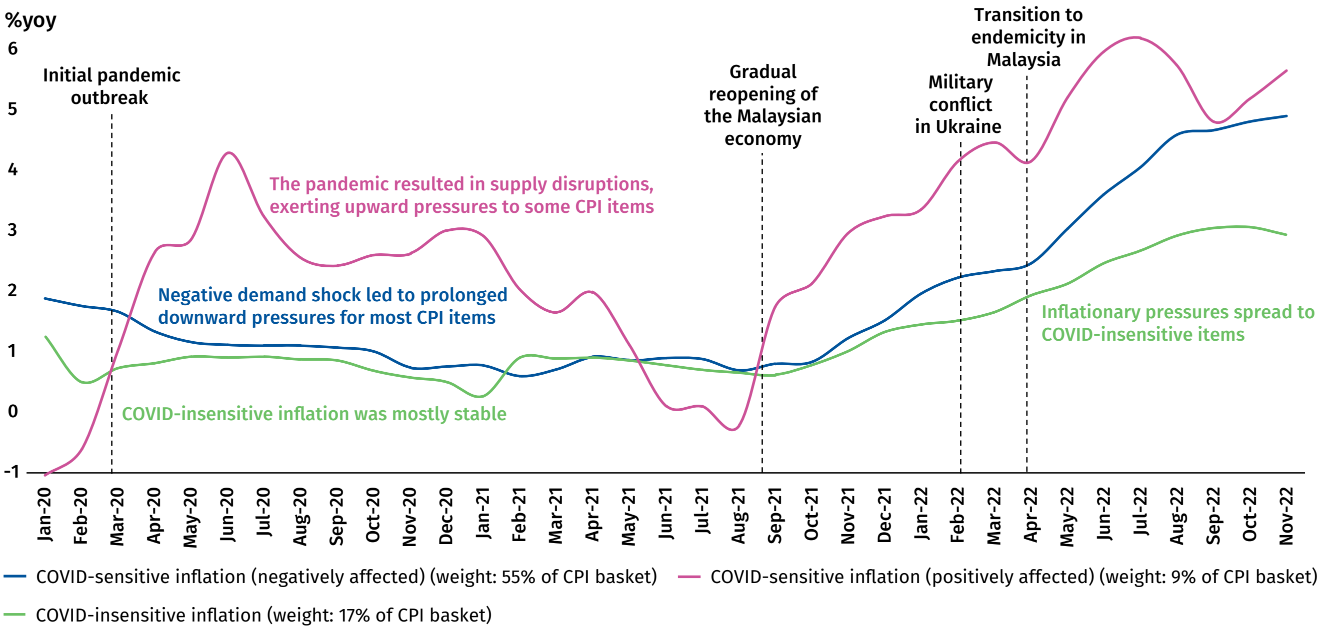
Source: Bank Negara Malaysia assessments

3 **In 2020-2021, inflation dynamics were driven mostly by pandemic developments. In 2022, however, inflationary pressures began to be observed in most CPI items, suggesting that other factors beyond the pandemic were at play**

Chart 3: Inflation by Pandemic Sensitivity

Recap on COVID-sensitive inflation methodology (*for more details, refer to EMR 2021 Box Article: An Anatomy of Inflation: Effects from the Prolonged Pandemic*):

1. CPI items are classified into two categories: Those that are statistically sensitive to pandemic shock (COVID-sensitive) and those that are not (COVID-insensitive)
2. Among COVID-sensitive items, some faced downward price pressures (negatively affected), while others faced upward pressures (positively affected)
3. To reflect the pandemic shocks only, this statistic excludes price-administered items, and items which had been affected by the severe monsoon season in 2021

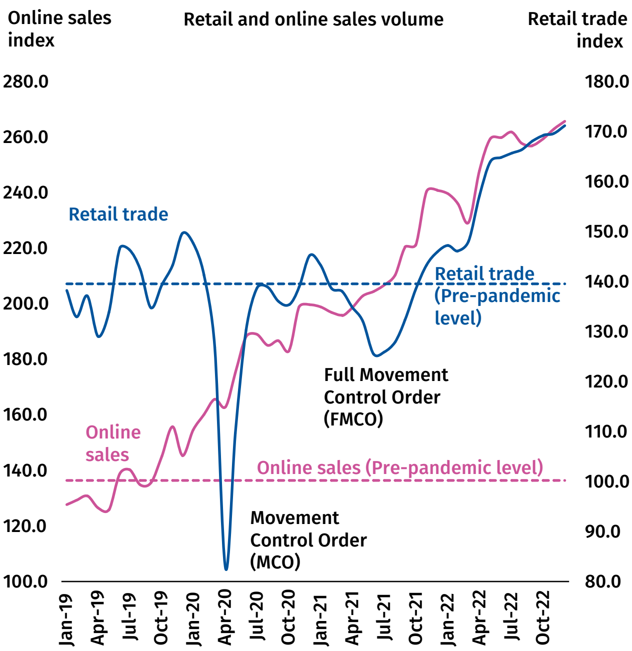


Source: Bank Negara Malaysia estimates

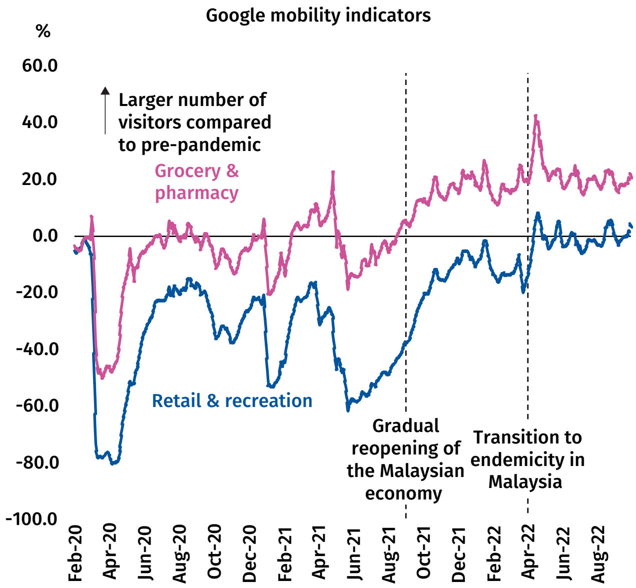
4 This turn of events reflected additional shocks, which coincided with pent-up demand following the reopening of the economy and the general rebound in economic activity

Chart 4 and 5: Indicators of Domestic Demand and Economic Activity

Additional shocks in 2022 included the military conflict in Ukraine, droughts in commodity-exporting countries; and domestically, from full relaxation of COVID containment measures and several policy measures, including the revision in minimum wage and EPF special withdrawals.



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

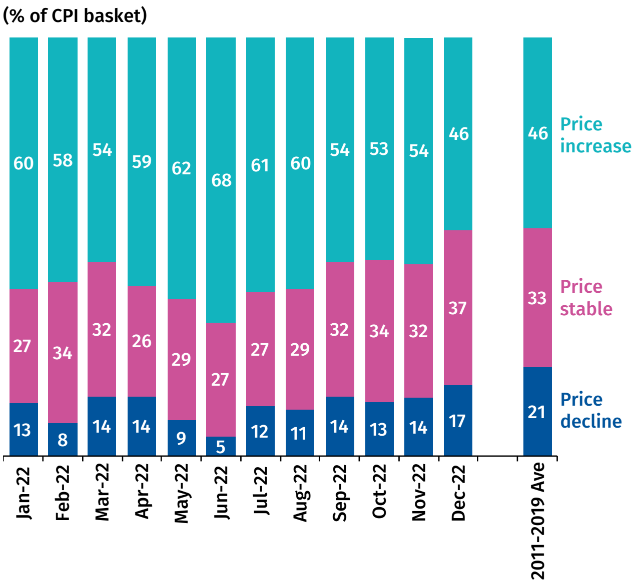


Note: The chart shows how the number of visitors (or time spent) in categorised places has changed compared to baseline days (the median value for the 5-week period between Jan -Feb 2020)

Source: Google Mobility Report

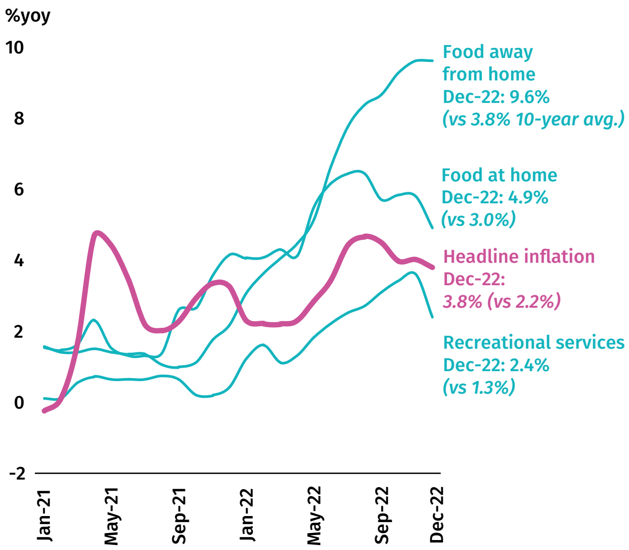
5 The resulting inflation was evident across most consumer items, most acutely for food. Nevertheless, there are signs of moderation in price pressures after a year of rising inflation

Chart 6: Monthly Price Changes of CPI Items



Source: Bank Negara Malaysia estimates based on Department of Statistics, Malaysia

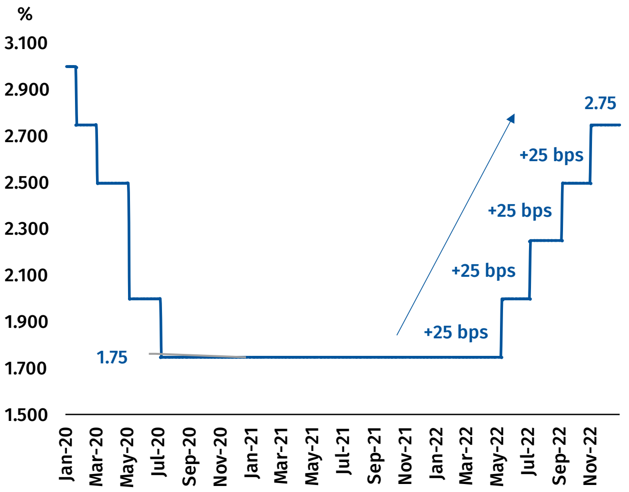
Chart 7: Inflation by Categories



Source: Bank Negara Malaysia estimates based on Department of Statistics, Malaysia

6 Monetary policy was gradually calibrated throughout 2022 given firmer economic recovery and amid signs of demand-driven inflation

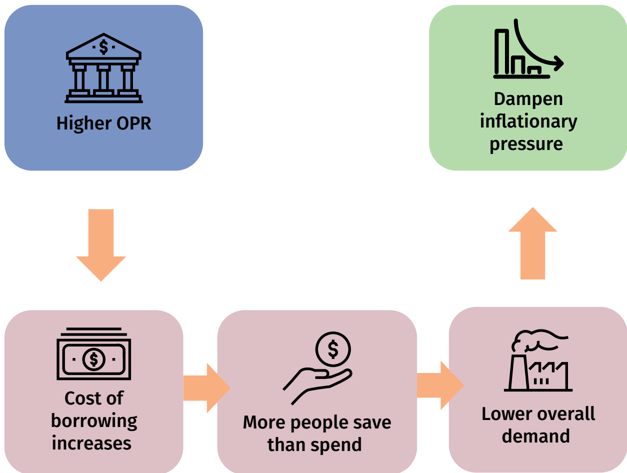
Chart 9: Overnight Policy Rate (OPR)



Source: Bank Negara Malaysia

7 The role of monetary policy is to maintain price stability that is conducive for sustainable growth. This, in turn, ensures that purchasing power is preserved

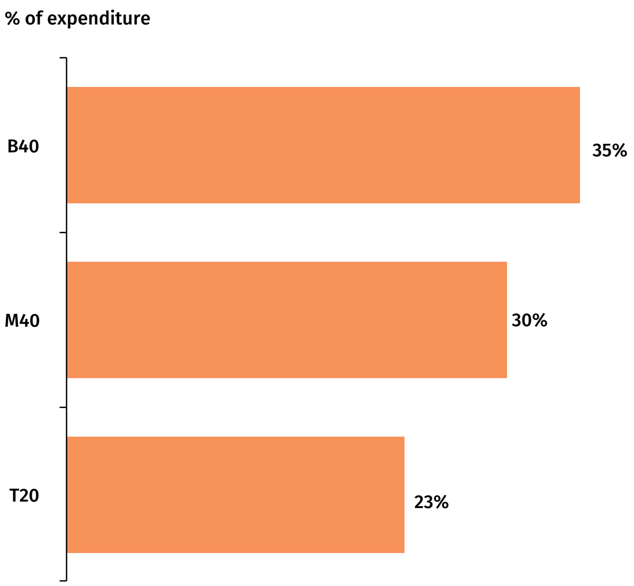
Chart 8: Stylised MP Transmission



Source: Bank Negara Malaysia assessments

8 Higher inflation in the past two years affected all Malaysians. Lower-income households were most impacted, given their higher spending on food

Chart 10: Spending on Food (Including Food Away from Home)



Source: Bank Negara Malaysia estimates based on 2019 Household Income and Expenditure Survey, Department of Statistics, Malaysia

9 Short-term measures have helped to partly alleviate the burden, but are not a substitute for structural reforms to create higher paying jobs and improve social protection

Chart 11: Policies to Address High Cost of Living

Short-term measures

- Price controls and subsidies on key essential items (e.g. fresh chicken, fuel and electricity)
- Cash transfers to vulnerable households

Key long-term reforms

- **Enhancements to social safety net**[1]
- **Active labour market programmes** via enhanced reskilling and upskilling initiatives to improve income and productivity
- **Improve food security**[2]

1/ For more details, refer to BNM EMR 2020 Box Article: A Vision for Social Protection in Malaysia
2/ For more details, refer to BNM Quarterly Bulletin 3Q 2021 Box Article: Closing the Food Gap: The Role of Structural Improvements in Agrofood Security

Source: Bank Negara Malaysia assessments

Promoting Financial Stability

One of the Bank's mandates is to promote financial stability in the interest of supporting sustainable economic growth. We do this by ensuring that the financial system remains resilient and can withstand shocks throughout economic cycles. This involves promoting strong and well-managed financial institutions. It also includes fostering safe and reliable clearing and settlement systems, and ensuring orderly financial markets. Ultimately, a sound and stable financial system facilitates the continuous delivery of effective services to financial consumers.

Financial Stability Priorities in 2022

As Malaysia fully transitioned to COVID-19 endemicity in 2022, economic activity recovered at a strong pace, with domestic growth expanding by 8.7%. However, this growth remained uneven across sectors, with certain economic segments continuing to struggle. At the same time, new challenges arose from global developments. These included elevated commodity prices, rising global inflation and strained supply chains. Aggressive tightening of monetary policy in developed economies further weakened most currencies against the US dollar, including the ringgit. Taken together, these events have resulted in increased cost pressures for firms and households. In addition, Malaysians were affected by more frequent climate-related events such as flash floods, and continued to be targets for financial scams and frauds.

Against this challenging backdrop, our regulatory and supervisory priorities were focused on -

- First, managing a smooth exit from exceptional policy measures during the pandemic, while maintaining support for individuals and businesses recovering from the pandemic;
- Second, addressing emerging risks associated with climate change and cyber threats;
- Third, further strengthening risk management, disclosure and governance practices of financial institutions; and
- Fourth, promoting fair treatment of consumers.

Unwinding of COVID-19 relief measures

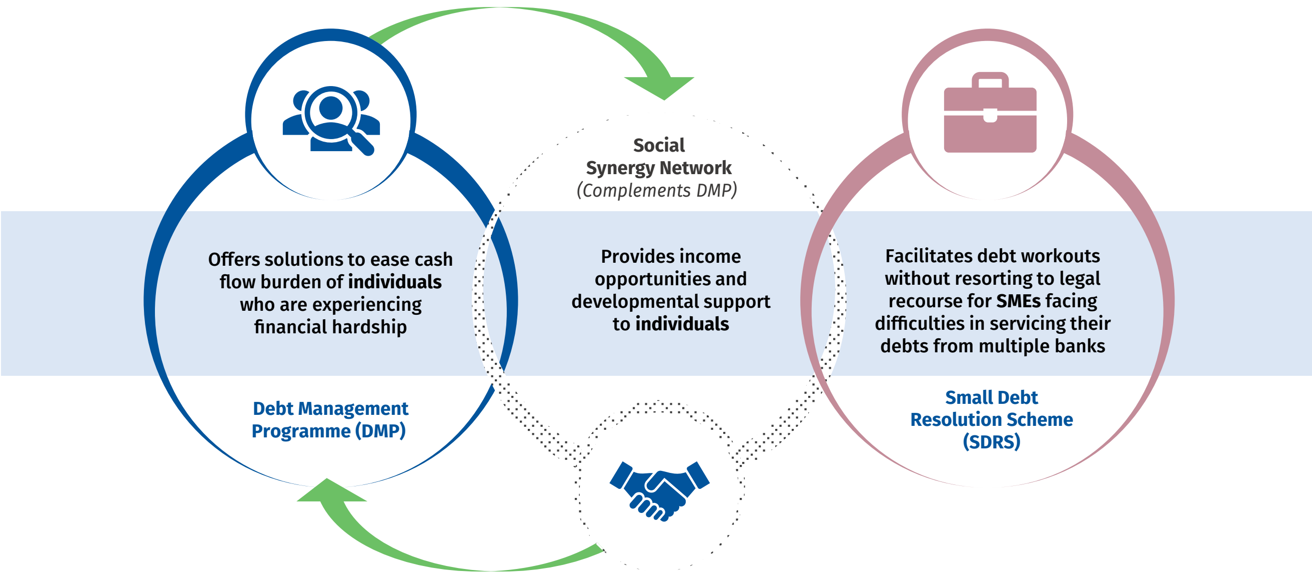
Banks, together with AKPK (Agensi Kaunseling dan Pengurusan Kredit), continued to implement the Financial Management and Resilience Programme (URUS) in 2022. URUS was put in place to ensure that help continues to be available to the most vulnerable borrowers at a more customised level when existing broad-based repayment assistance programmes came to an end. Over 7,000 individuals who were enrolled under URUS[1] received help to manage their debt and personal finances under a two-year programme. Beneficiaries will continue to have access to advisory, education and income support services from AKPK throughout the two years. The support measures introduced throughout the pandemic have helped prevent permanent scarring of affected borrowers. As at December 2022, the delinquency and impairment ratios among borrowers who exited the earlier broad-based repayment assistance programmes remained low at 1.4% and 1.8%, respectively, signalling improvements in their debt servicing ability.

[1] The programme was open for applications from November 2021 to March 2022.

To ensure effectiveness of relief measures, we reviewed how banks were engaging affected borrowers and advising them on steps that they could take to review their instalment plans when their financial circumstances improved. This is important to reduce the cost of their overall debt. We found that banks were taking specific steps to reach out to their customers on reviewing their repayment plans. Customers were also provided with convenient access points and options to adjust their loan instalments, although this could be improved in some banks. Anecdotal evidence from some banks suggest that borrowers generally appear to be more inclined to maintain lower repayments to preserve their financial buffers - possibly in response to higher costs of living.

While COVID-19 repayment assistance programmes have concluded, banks and AKPK continue to provide assistance to customers in need. Banks continue to offer customised restructuring and rescheduling (R&R) plans to borrowers that are still facing difficulties servicing their debt, alongside AKPK's ongoing programmes (see Diagram 1). SMEs may also obtain financing from various funds provided by the Bank. These funds are intended to help support SMEs' economic recovery and future growth. More details are found in the chapters "Promoting a Progressive and Inclusive Financial System" and "Promoting a Progressive and Inclusive Islamic Financial System".

Diagram 1: AKPK's Programmes and Support Services for Distressed Individuals and SMEs



Source: Bank Negara Malaysia

Regulatory Priorities

The Bank issued several key policies in 2022. These policies aim to strengthen financial institutions' resilience and preparedness against risk events, foster adoption of global regulatory standards appropriate to domestic conditions and strengthen financial institutions' internal governance, controls, disclosures and business conduct.

Safeguarding against climate-related risks

Financial sector resilience against climate risk events is crucial to us. We are taking active steps to integrate climate risk considerations into our regulatory and supervisory frameworks. This is to ensure that financial institutions effectively monitor and manage climate-related risks. Our efforts on this front are summarised in Diagram 2. Further details on broader climate initiatives can also be found in the chapter "Towards a Greener Financial System".

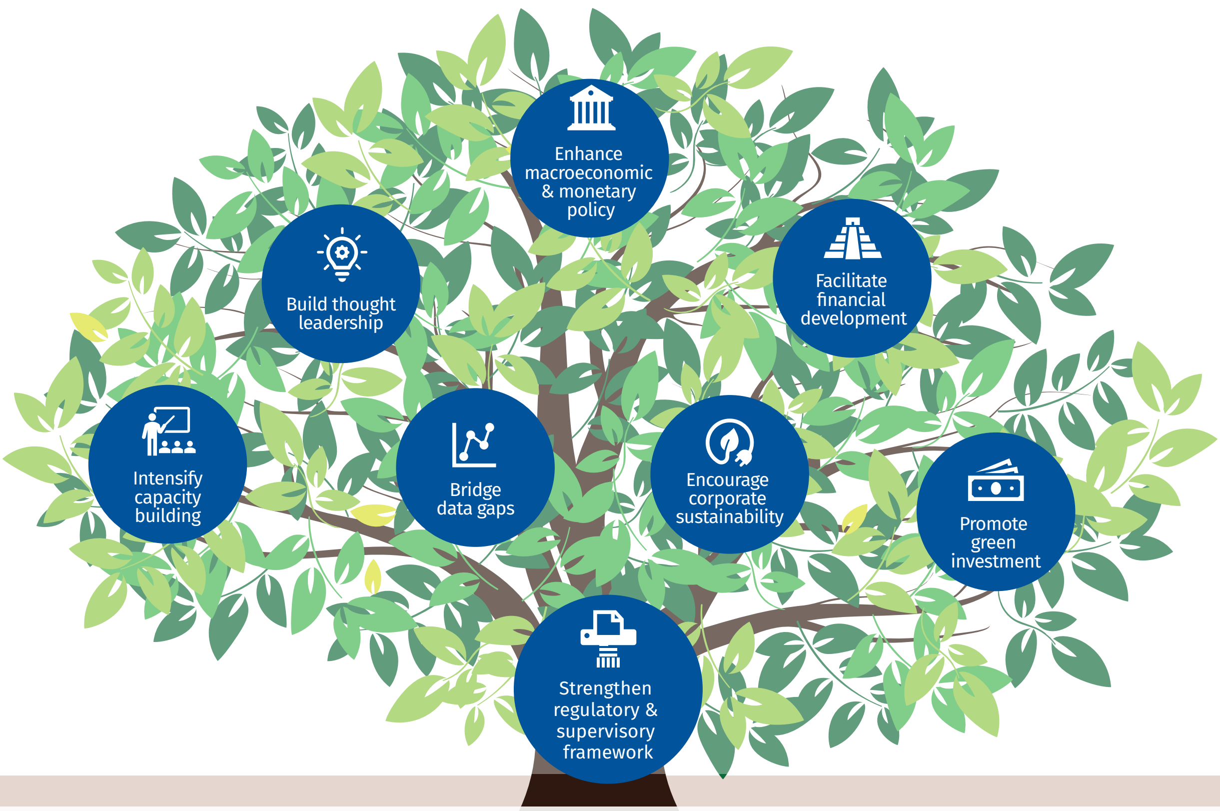
Fostering implementation of global regulatory standards

We remain committed in aligning our domestic regulatory framework with international standards, where appropriate, to enhance the resilience of our financial system. This includes the adoption of key elements[2] from the Basel III reform package.

[2] Particularly the minimum capital requirements, leverage ratio and liquidity standards.

Diagram 2: Overview of Climate-Related Initiatives, including Key Regulatory and Supervisory Initiatives

Ensuring resilience against climate-related risks and a just and orderly transition to a low carbon economy



In 2022, we undertook three initiatives in regulation and supervision to enhance climate resilience of the financial sector

1 Climate Risk Management and Scenario Analysis Policy Document	2 2024 Climate Risk Stress Testing (CRST) Exercise Discussion Paper	3 Climate Change and Principle-based Taxonomy
Outlines the principles and specific requirements on the management of climate-related risks by financial institutions	**Explores proposed parameters on the applicability and format of CRST exercise, and technical elements such as scenario selection, portfolio scope and granularity**	**Improves availability and collection of economic activity data based on the extent they meet climate objectives and promote transition to a low-carbon economy**

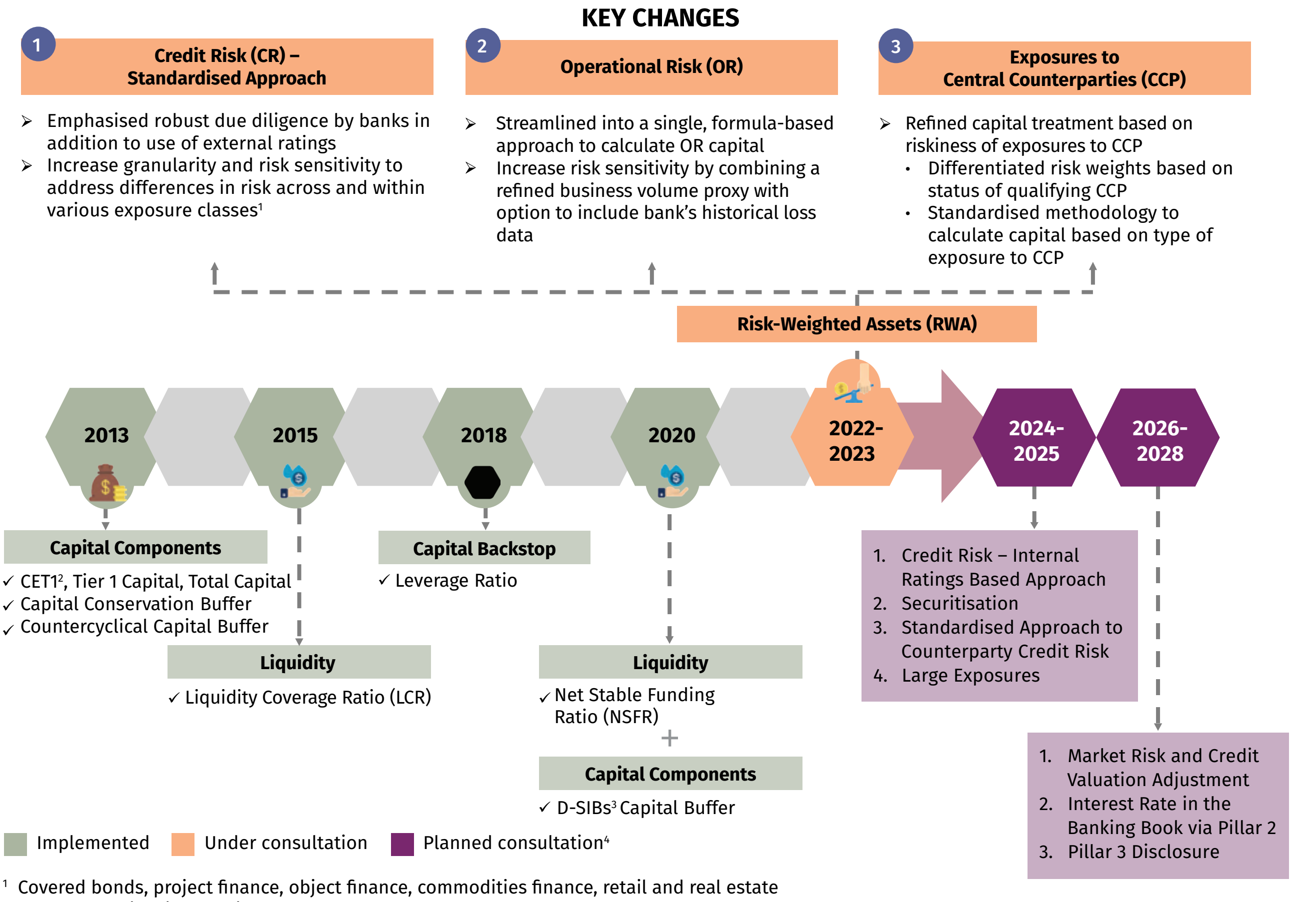
These initiatives allow financial institutions to...

✓ Integrate climate-related risks into their governance, business strategies, risk management framework, scenario analysis and disclosures ✓ Improve and complement overall risk management framework	✓ Facilitate assessment on their resilience to physical and transition risks arising from various climate scenarios ✓ Facilitate reviews and engagements with supervisors	✓ Promote consistent classification of exposures to climate-related risks across the industry ✓ Enhance capabilities to assess economic activities and their associated impacts on climate and the broader environment

Source: Bank Negara Malaysia

In 2022, we worked on revisions to standards for risk-weighted assets of banks (see Diagram 3). Three Exposure Drafts were issued (on Credit Risk, Operational Risk and Exposures to Central Counterparties, respectively). These revisions aim to improve the robustness and risk sensitivity of risk-weighted assets. In addition, they will improve the comparability of capital ratios among banks domestically and internationally. Banks applying internal models will also be required to adopt a new capital floor requirement based on the revised standardised approach.

Diagram 3: Malaysia's Progress in Adopting Basel III Reform Package



[1] Covered bonds, project finance, object finance, commodities finance, retail and real estate
[2] Common Equity Tier 1 capital
[3] Domestic systemically important banks
[4] Consultation timelines will take into consideration future developments

Source: Bank Negara Malaysia

Strengthening internal governance, controls, disclosures and conduct

Efforts to strengthen the pillars of a sound prudential framework continued amid an evolving operating landscape and rapid pace of digitalisation in the economy (see Diagram 4). We focused on strengthening disclosures and transparency as well as ensuring effective and timely management of technology and cyber risks. We also strengthened the standards on proper advice and selling practices to promote consistent standards across insurance intermediaries[3]. This aims to mitigate the risk of mis-selling and safeguard consumer interests with the emergence of more diversified channels of distribution for insurance and takaful products.

The Bank is committed to being open, transparent and inclusive in our policy making process. Inputs obtained from engagements with the industry and the public through various channels are useful in informing our final policies, including the approach to implementation, to achieve the intended policy outcomes.

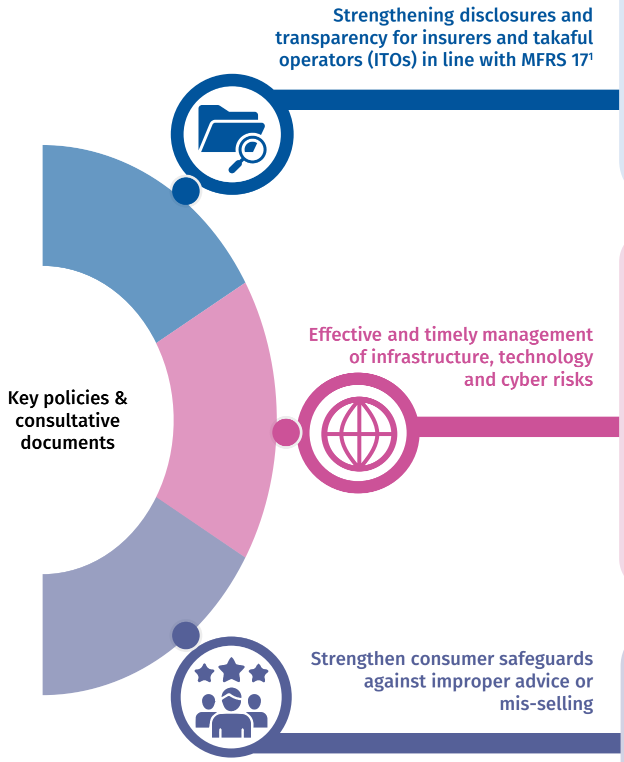
Supervisory Priorities and Approach

We adopt a risk-based and forward-looking approach when supervising financial institutions that are licensed and approved by the Bank. In the past year, we gradually resumed on-site reviews to assess financial institutions' risk profiles, including the impact from adjustments made to internal controls, systems and processes in the wake of the pandemic.

Throughout the year, we continued to monitor and assess emerging risks faced by financial institutions. We focused our supervisory reviews on assessing

[3] This includes financial advisers (FAs), bancassurance/bancatakaful (banca) sales staff and insurance/takaful agents.

Diagram 4: Summary of Key Policies and Consultative Documents Issued in 2022



Financial Reporting
The Policy Document aims to promote comparable and transparent disclosures by ITOs in line with MFRS 17.
- Specifically for takaful operators, additional disclosure requirements are introduced to reflect unique features of takaful mainly on[2]:
  - ✓ Presentation of financial information for takaful fund in a separate column to reflect the segregation of ownership between the fund and takaful operator; and
  - ✓ Disclosure of *qard* (interest-free loan).

Appendix of RMiT[3]: Cloud Technology Risk Assessment Guideline
The Exposure Draft touches upon risks associated with adoption of cloud services and outlines:
- ✓ Guidance for the adoption of cloud services by financial institutions; and
- ✓ Assessment of common key risks and considerations of control measures for various cloud service models.

Governance, Risk Management and Operations for Money Services Business (MSB)
The Policy Document aims to enhance regulatory requirements for the MSB industry to:
- ✓ Further elevate the professionalism and compliance standards of MSBs to mitigate money laundering and terrorism financing risks; and
- ✓ Improve customer protection.

Bancassurance/Bancatakaful
The Policy Document aims to enhance the bancassurance/bancatakaful (banca) channel and further strengthen consumer safeguards.
- ✓ Strengthened obligation of ITOs' board and senior management and banca partners to uphold good sales practices;
- ✓ Enhanced disclosure and training requirements; and
- ✓ Additional safeguards to protect vulnerable consumers.

Prudent and Professional Conduct by Financial Advisers (FAs)
The Policy Document aims to strengthen the conduct of approved FAs, including having minimum qualification.

Professionalism of Insurance and Takaful Agents
The Exposure Draft proposes new requirements on ITOs to promote high standards of conduct and professionalism of insurance and takaful agents. As such, ITOs are expected to ensure:
- ✓ Appointed agents meet minimum entry qualifications on mandatory knowledge areas; and
- ✓ Corrective actions are taken on errant agents.

[1] Malaysian Financial Reporting Standards (MFRS) 17 is a new accounting standard for insurance contracts
[2] Aligned with recommendations by the Malaysian Accounting Standards Board (MASB) and the Shariah Advisory Council of Bank Negara Malaysia (SAC)
[3] Policy Document on Risk Management in Technology (RMiT)

Source: Bank Negara Malaysia

how financial institutions are managing risks from the unwinding of COVID-19 related measures, headwinds from the external environment and domestic large-scale catastrophes. A summary of the key areas we pursued is in Diagram 5.

A key focus of the insurance and takaful industry during the year was preparations for the adoption of the new accounting standard (MFRS 17), which takes effect from 1 January 2023. This entailed investments to integrate their business, finance and IT systems, and reconfigure processes, where required. The impact of MFRS 17 on ITOs' shareholders' equity is more significant for family or life ITOs and varies across ITOs. This is mainly driven by the specific business portfolio and the choice of assumptions used to derive insurance/takaful liabilities under the new accounting approach. Overall, all ITOs' shareholders' equity remains positive[4]. Given the significant changes arising from

[4] i.e., ITOs' assets exceed liabilities.

Diagram 5: Focus Areas of Supervisory Monitoring in 2022

	WHAT? DID WE DO?	WHY? PURSUE WHAT WE DID?
CREDIT RISK	**Repayment trends upon unwinding of COVID-19 measures** • Monitor quality of loans held by banks	✓ Ensure banks' quality of loans remains within intended risk appetite and commensurate with capital buffers ✓ Ensure banks' continued ability to provide credit to borrowers on an ongoing basis
FUNDING AND LIQUIDITY RISK	**Funding and liquidity positions of financial institutions amid volatile market conditions** • Assess impact to banks following tightening of monetary policy in developed economies and depreciation of ringgit	✓ Ensure banks' continued ability to meet their financial obligations and secure funding
	• Monitor banks' liquidity positions • Improve accuracy and integrity of banks' liquidity indicators • Enhance ITOs' liquidity risk management practices	✓ Ensure financial institutions' ability to meet cash flow obligations, including during times of unexpected shock ✓ Ensure financial institutions have robust strategies, policies and procedures to manage liquidity risk
UNDERWRITING RISK	**Impact to ITOs following more frequent flood events** • Monitor ITOs' exposure to flood events, with focus on impact of higher claims	✓ Ensure readiness of ITOs to respond promptly to higher than expected flood claims

Source: Bank Negara Malaysia

the standard to the reporting and presentation of the financial results of ITOs, ITOs will continue to engage key stakeholders to explain the impact of MFRS 17 on their financial performance so that the information disclosed is well understood.

Promoting fairer outcomes for financial consumers

We also enhanced oversight of financial institutions' business conduct to ensure consumers are treated fairly. This takes into consideration the evolution of business models over the years, driven by increasing digitalisation. In 2022, the Bank focused its market conduct supervisory activities and priorities in five areas as summarised in Diagram 6 to address key and emerging conduct risks.

The Bank's thematic, on-site and off-site reviews covered banks' and ITOs' key product offerings. For banks, the reviews focused on the quality of suitability and affordability assessments conducted when onboarding borrowers, and repricing practices to ensure fair treatment of customers. For ITOs, we reviewed key motor product offerings to ensure fair contractual terms applied to customers. We also focused on reviewing the redemption process of Perlindungan Tenang vouchers. More details on this can be found in the chapter on "Promoting a Progressive and Inclusive Financial System". Where appropriate, the Bank took firm and proportionate actions against financial institutions that did not meet expected standards. These include issuing directives to remove unfair contractual terms, improve clarity of policy terms on benefits and exclusions, refund unfair charges to consumers and strengthen due diligence of distribution partners. Further details on the actions taken can be found in the section on "Supervisory and Enforcement Actions".

Cyber resilience and combating financial scams

Ensuring cyber resilience and combating financial scams is one of our key priorities. Recent data breaches globally have impacted customers' finances and confidence in the payment system. In 2022, the Bank conducted the first industry-wide cyber drill exercise, BNM RE4CT. With over 270 participants from 35 financial institutions, BNM RE4CT was a good testbed to ascertain financial institutions' resilience and responses against cyber threats. The industry exhibited satisfactory levels of readiness and resilience in responding to cyber threats. We found that financial institutions were well-versed with

Diagram 6: Key Business Conduct Areas to Ensure Fair Treatment of Financial Consumers

Lending practices
Proper affordability assessment and debt-service ratio to promote welfare of financial consumers in the long run

Fees and charges
Avoid excessive or unreasonable fees and charges that can significantly disadvantage certain groups of financial consumers

Terms and conditions
Fair balance between the rights and obligations of contracting parties to ensure consumers are not subject to discriminatory practices

Product suitability
Due regard to interests, needs and circumstances of financial consumers when providing advice or product recommendation

Marketing and disclosure
Provide key information that is easy to understand and that allows time and opportunity for financial consumers to make decisions without aggressive product pushing

Source: Bank Negara Malaysia

their internal incident response and business continuity plans. However, there is room for financial institutions to further improve communication with the public and media. This is to ensure prompt dissemination of accurate information during a cyber crisis. In addition to BNM RE4CT, we also continued to collaborate with the financial industry to pursue initiatives to strengthen their preparedness against cyber-attacks (see Diagram 7).

With financial fraud and scams on the rise, the Bank focused its supervisory efforts to strengthen technology risk management of financial institutions. This is aimed at mitigating cases of financial fraud and scams. During the year, we issued supervisory letters to financial institutions covering new detailed requirements and expectations on managing online frauds[5]. This is in addition to the five key measures for immediate implementation across all banks (see Diagram 8). We also continued to collaborate with the financial industry, Polis Diraja Malaysia (PDRM), Malaysian Communications and Multimedia Commission (MCMC) and National Anti-Financial Crime Centre (NFCC) to combat financial fraud and scams, and create greater public awareness on relevant issues and security measures.

Additionally, the Bank continuously updates the Financial Consumer Alert List. This list allows consumers to cross-check the legitimacy of entities or schemes representing themselves as regulated financial institutions or activities. The Bank takes all forms of financial fraud and scams seriously as they undermine public confidence and can impact livelihoods. As such, we will continue to enhance our supervisory efforts and response in this area.

Engagements with other regulators and supervisors

In the Bank's continued cooperation with our international counterparts, we participated in three supervisory colleges organised by the home regulators of locally incorporated foreign banks. These engagements are important to support effective supervision and oversight of financial institutions in Malaysia. It also serves as

5 Some examples include monitoring and blacklisting devices or phone numbers that have been used for illegal transactions, and ensuring that internet banking services and mobile applications are only run on secured versions of web browsers and supported versions of operating systems, respectively.

an important platform to cultivate trust and timely information sharing on emerging risks and key supervisory issues.

We also continued to actively participate in international forums and committees[6]. These platforms provide useful insights for our policy development and supervisory functions, particularly in key areas such as climate change and emerging technology. This year, we participated in a cross-border crisis simulation exercise organised by the Financial Stability Institute (FSI). The exercise provided an opportunity for the Bank to evaluate our cross-border crisis management framework which led to several enhancements identified to further strengthen the effectiveness of existing cross-border arrangements. We will use these insights to continue engaging with financial institutions, the Ministry of Finance and Perbadanan Insurans Deposit Malaysia (PIDM) to build sound crisis management as well as recovery and resolution planning capabilities.

Diagram 7: Key Cyber Resiliences Initiatives

Building internal capabilities

BNM Internal Cyber Drill & Cyber Resilience Week

- The Bank organised Cyber Resilience Week in November 2022 to facilitate information sharing by various cyber industry experts[1].
- This is to:
  1. Test the effectiveness and efficiency of the Bank's cyber security processes; from detection to response to mitigation.
  2. Raise awareness on the latest cybercrime trends, their impact, and how to enhance cyber resilience and hygiene in a post-pandemic world.

Enhance industry preparedness

Industry Cyber Drill, BNM RE4CT

- The Bank organised a cyber drill in February 2022 that simulated a ransomware attack.
- This is to:
  1. Test the ability of cyber security teams in detecting and mitigating cyber-attacks.
  2. Gauge industry-level cooperation, coordination and information-sharing.
  3. Test institutional-level cooperation, coordination and information-sharing.
  4. Improve individual and collective knowledge on incident response and recovery activities.

Key Cyber Resilience Initiatives

Strengthen legal frameworks

Cyber Security Legislation for Malaysia

- Ongoing initiative to draft the Malaysia Cyber Security Bill, with the Bank as the financial sector lead.
- The Bank hosted a multi-stakeholder engagement[2] to discuss the drafting of the Malaysia Cyber Security Bill in November 2022. The session facilitated exchange of views on potential coverage, applicability, and comprehensiveness of the proposed legislation.

[1] PDRM, National Scam Response Centre (NSRC), MCMC and cyber security-related companies such as Trend Micro, CyberSecurity Malaysia and Vigilnet.my

[2] Participation from financial institutions, payment system operators, Payments Network Malaysia Sdn Bhd (PayNet), PIDM, National Cyber Security Agency Malaysia (NACSA) and International Islamic University Malaysia (IIUM)

Source: Bank Negara Malaysia

[6] These include the: (i) Basel Committee on Banking Supervision (BCBS); (ii) Cybersecurity Resilience and Information Sharing Platform (CRISP); (iii) International Association of Insurance Supervisors (IAIS); (iv) Executives' Meeting of East Asia-Pacific Central Banks (EMEAP); (v) Islamic Financial Services Board (IFSB); (vi) Network for Greening the Financial System (NGFS); and (vii) ASEAN Taxonomy Board.

Diagram 8: Whole-Of-Nation Approach in Combating Financial Fraud and Scams

What have we done to fight financial fraud and scams ?

Prevent: Strengthen safeguards against financial fraud and scams

5 KEY MEASURES FOR IMMEDIATE IMPLEMENTATION

- ✓ Migration from SMS One Time Passwords (OTP) to more secure forms of authentication
- ✓ Tightening of fraud detection rules and triggers for suspected scam transactions, with immediate notification to customers
- ✓ Introduction of cooling-off period for first-time enrolment of banking services or secured devices
- ✓ Restriction to one mobile or secured device only for authentication
- ✓ Setting up of dedicated hotlines by banks for customers to suspend bank accounts if found to be compromised

Recover: Establish seamless information flow and stakeholder coordination to trace, hold and recover stolen funds and ultimately to arrest, charge and convict criminals

- ✓ Establishment of the National Scam Response Centre (NSRC), a joint effort between the NFCC, PDRM, the Bank, the MCMC, financial industry and telecommunications industry

Educate: Raise public awareness, including scam tactics used, and steps to avoid becoming victims of financial scams

- ✓ Launch of the National Scam Awareness Campaign by ABM, AIBIM and ADFIM[1]
- ✓ Continuous collaboration and coordination on nationwide advocacy on the 3S-s - **Spot**, **Stop** and **Share**

Spot

Look out for signs of scams. Question, investigate and enquire to determine legitimacy of transaction

Stop

If anything looks doubtful or suspicious, stop engaging. Do not provide any banking or payment details

Share

Share your knowledge of scams with friends and family. Help protect others by reporting scams to relevant authorities so that they can act

What else are we doing to fight financial fraud and scams ?

- ✓ Establish **industry taskforce** to develop and implement industry-wide initiatives, leveraging on new technologies
- ✓ Establish a **National Cyber Lab** to conduct collaborative cyber fraud investigations among authorities
- ✓ **Continuous updates** on Amaran Scam Facebook page by the Bank as well as Cyber Crime Alert and Semak Mule by PDRM

[1] Association of Banks in Malaysia (ABM), Association of Islamic Banking and Financial Institutions Malaysia (AIBIM) and Association of Development Finance Institutions Malaysia (ADFIM)

Source: Bank Negara Malaysia

Supervisory and Enforcement Actions

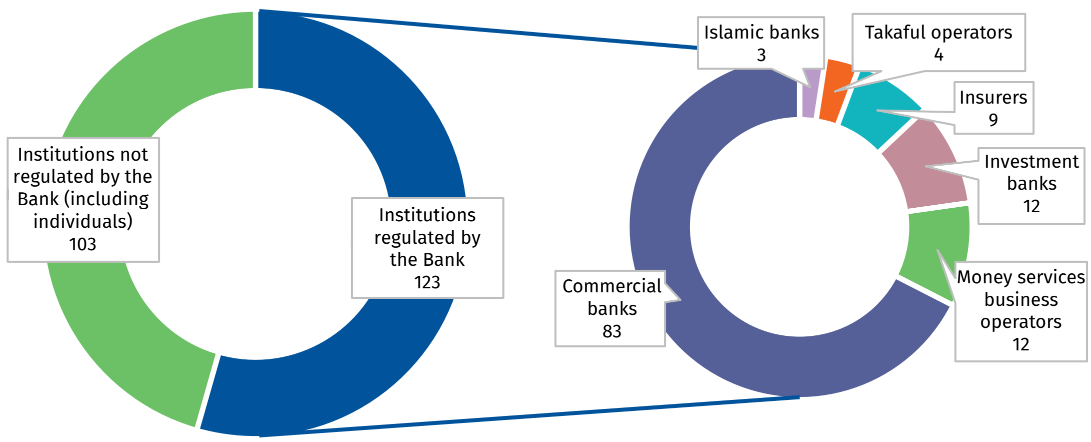
The Bank employs a range of supervisory and enforcement actions to promote sound compliance, governance and risk management practices among financial institutions. This is important to protect the interest of consumers and preserve the integrity of our financial system. The types of actions taken against financial institutions depend on the severity of breaches. Supervisory actions such as reprimands and directives are preventive and corrective in nature. We take these actions to ensure financial institutions rectify gaps and establish strong foundations in compliance. In contrast, enforcement actions such as administrative penalties and compounds are more punitive and are applied to material regulatory breaches. These include criminal misconduct, recurring and unresolved risk management and control deficiencies, and breaches that have adverse consequences for the public interest.

Over the years, our enforcement approach has supported positive changes in the risk and compliance culture of financial institutions. Financial institutions continue to increase their commitments to strengthen and improve overall controls and systems. In 2022, we took 123 supervisory and enforcement actions against financial institutions (see Chart 1). Majority of the actions taken were against low-severity breaches.

We also continued our efforts to combat financial crimes such as illegal deposit-taking and remittance. During the year, we issued seven cease and desist orders against illegal money services business (MSB) operators and opened five investigation papers. This resulted in the Bank imposing a total compound of RM50 million against these entities for illegal deposit-taking and the laundering of proceeds from illegal activities. Additionally, the Bank also secured court convictions against four companies and one individual for illegal MSB, illegal deposit-taking, contravention of banking secrecy requirements and money laundering. These convictions resulted in fines totalling RM141.4 million and jail terms for the offenders.

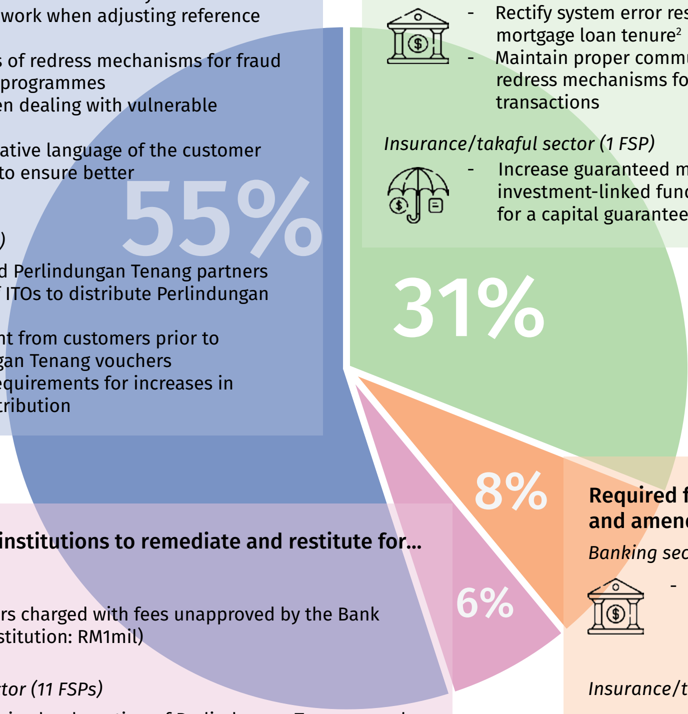
On the market conduct front, we took active steps to safeguard consumers' interests. Prompt actions were taken to cease unfair industry practices and to ensure fair redress by errant financial institutions to affected consumers. Arising from these, the Bank secured restitutions amounting to over RM39.6 million for half a million financial consumers. Other supervisory actions taken are as summarised in Diagram 9.

Chart 1: Number of Actions Taken by Type of Institutions in 2022



Source: Bank Negara Malaysia

Diagram 9: Summary of Supervisory Actions Taken to Uphold Fair Consumer Outcomes



Issued letters to financial institutions to...

Banking sector (57 FSPs[1])

- Ensure strict compliance with the Policy Document on Reference Rate Framework when adjusting reference rates
- Improve effectiveness of redress mechanisms for fraud cases and awareness programmes
- Exercise due care when dealing with vulnerable consumers
- Prioritise the use of native language of the customer when engaging them to ensure better transparency/clarity

Insurance/takaful sector (50 FSPs)

- Ensure only appointed Perlindungan Tenang partners and intermediaries of ITOs to distribute Perlindungan Tenang products
- Obtain explicit consent from customers prior to redeeming Perlindungan Tenang vouchers
- Enhance disclosure requirements for increases in premium/takaful contribution

Instructed financial institutions exhibiting operational lapses to...

Banking sector (58 FSPs)

- Rectify system error resulting in unfair extension of mortgage loan tenure[2]
- Maintain proper communication protocols and fair redress mechanisms for unauthorised credit card transactions

Insurance/takaful sector (1 FSP)

- Increase guaranteed minimum unit price for investment-linked funds to comply with requirements for a capital guaranteed fund

Required financial institutions to remediate and restitute for...

Banking sector (1 FSP)

- Customers charged with fees unapproved by the Bank (Total restitution: RM1mil)

Insurance/takaful sector (11 FSPs)

- Unauthorised redemption of Perlindungan Tenang vouchers (Total restitution: RM32.1mil)
- Delay in payment benefits upon claim, maturity or surrender (Total restitution: RM2.4mil)
- Mispricing of investment-linked funds and overcharging of *wakalah* fees (Total restitution: RM1.5mil)
- Surplus from Participant's Risk Fund used for non-contractual benefits (Total restitution: RM2.6mil)

Required financial institutions to review and amend contract terms to ensure...

Banking sector (8 FSPs)

- Contract clauses do not unfavourably shift the rights and obligations for customers

Insurance/takaful sector (8 FSPs)

- Motor policies/takaful certificates are fair to policy owners/participants throughout their contract term

[1] i.e., Financial Service Provider
[2] Only 1 FSP was found to have system errors and instructed to rectify the issue

Source: Bank Negara Malaysia

Going Forward

The financial landscape is expected to continue to undergo rapid changes in the coming years. This will be driven by forces of change such as digitisation of financial services, climate change and demographic changes in Malaysia. These changes will inevitably bring new regulatory challenges. As such, the Bank will continue to ensure that our regulatory and supervisory frameworks -

(i) Respond to emerging issues in a timely manner;

(ii) Promote a financial system that is resilient to future shocks;

(iii) Set high standards of professionalism and fair conduct for financial service providers. This includes safeguarding consumers' interest against unfair or unethical practices, particularly in the case of vulnerable segments; and

(iv) Preserve the integrity and safety of the financial system. This includes introducing new process improvements to ensure timely and effective enforcement actions and continued collaborations with other law enforcement agencies to combat illegal activities.

Promoting a Progressive and Inclusive Financial System

In 2022, our strategies focused on promoting a financial system that supports a more digitalised, diversified, inclusive, and climate resilient economy. We are guided by the objectives and desired outcomes of the Financial Sector Blueprint 2022-2026.

Advancing the Digitalisation of Financial Services

During the year, we continued efforts to establish a conducive ecosystem that spurs greater innovation, competition and dynamism. A key part of this is facilitating the entry of new digital-first players into the financial sector. Digital banks offer banking services online without a physical branch network, allowing them to overcome geographical barriers. Digital banks apply innovative technologies, which can include personalised solutions backed by data analytics, without the constraint of legacy systems. Their attention on user experience should also bring more convenience to consumers. Digital banks are expected to focus on underserved and unserved segments, which will advance the financial inclusion agenda and enhance society's participation in the economy. In April 2022, the Minister of Finance granted conditional approval to five digital bank applicants. The digital banks are currently undergoing operational readiness checks and may begin operations by the second quarter of 2024. During the year, digital banks have started appointing their management and Board members, instituting key policies and control procedures, and finalising their digital infrastructure. Digital banks have also engaged independent external parties to objectively review their state of readiness. The Bank will also conduct an operational readiness review before the digital banks commence operations.

In the same vein as digital banks, new digital insurers and takaful operators (DITOs) may soon enter Malaysia's financial landscape to deliver greater inclusion, market competition, and efficiency, primarily through digital means (Diagram 1). DITOs are expected to achieve this via driving new types of business models and offering wider product choices. In November 2022, the Bank issued an Exposure Draft on the Licensing and Regulatory Framework for DITOs. We sought to introduce licensing requirements that are proportionate to the complexity of DITOs during their initial stage of operations. Similar to digital banks, the newly licensed DITOs will be required to observe a foundational phase and comply with sound risk management and consumer protection requirements. During this period, they would be subject to simplified requirements such as a lower minimum number of Shariah committee members and a lower minimum paid-up capital. The Bank aims to finalise the policy document and invite applications for up to five DITO licences in 2023.

Diagram 1: Value Propositions of DITOs

Inclusion	Deepen financial inclusion to increase awareness and financial resilience
Competition	Introduce more competitive and innovative products to cater to various financial needs with transformative technology
Efficiency	Provide greater efficiency (with higher quality services) for seamless consumer experience and greater cost savings

Source: Bank Negara Malaysia Exposure Draft on the Licensing and Regulatory Framework for DITOs

The Bank maintains focus on sound risk management and consumer protection for DITO applicants.

We have also revised our policies to better support digitalised business models and solutions. The Exposure Draft on Electronic Know-Your-Customer (e-KYC) was issued in February 2023. It expands on the existing e-KYC requirements to include digital account openings for businesses and individuals. It also aims to help financial institutions (FIs) in adopting the latest technological advancements in e-KYC, while preserving the integrity of the financial system.

The Financial Technology Regulatory Sandbox (Sandbox) remains an important avenue for the financial industry to experiment with new ideas. In 2022, nine solutions were facilitated under the Sandbox. Of this, four new initiatives have been tested, encompassing insurtech and Buy-Now-Pay-Later solutions. Building on these experiences, the Bank will introduce enhancements to the Sandbox framework with an exposure draft expected to be issued in the first quarter of 2023. This will include two key enhancements: (i) accelerating the turnaround time to realise innovations for FIs with strong risk management capabilities; and (ii) simplifying the eligibility assessment for the Sandbox.

We continue to intensify our engagements with the industry and other stakeholders to advance the digital agenda. In January 2022, we hosted the second edition of MyFintech Week. The week-long online event saw over 4,000 participants and speakers participate in opportunities to drive digitalisation for recovery, sustainability and inclusion in Malaysia. Key highlights from the event are further detailed in Diagram 2.

Deepening Financial Markets

In 2022, we undertook several initiatives to further advance the domestic financial market. These were aimed at improving market access, liquidity, and governance arrangements. The Bank established sub-committees within the Financial Markets Committee[1] (FMC) dedicated to the development of the domestic bond financial markets and Islamic financial markets.

Diagram 2: MyFintech Week 2022

Key targets achieved

- > 4,000 attendees
- > 32,000 session views
- > 226,000 social media impressions
- Participated by key players in the fintech ecosystem e.g. financial institutions, fintech firms, government agencies, multilateral organisations, and subject matter experts

Insights identified

- Enhance Sustainable Development Goals-related data collection capabilities across the economy, particularly the carbon-intensive sectors
- Accelerate efforts on open data to enhance productivity and efficiency in the economy
- Undertake fundamental reforms in education to ensure a future-ready workforce
- Reinforce Malaysia's strategic position in the global *halal* economy by leveraging the nation's leadership in Islamic finance
- Manage digital exclusion risks amid fast digital adoption to ensure inclusive growth by integrating social impact into business-as-usual practices
- Leverage infrastructure-level linkages and shared resources to drive the next phase of the financial sector development i.e. regional payment interlinkages within ASEAN

Startup development

- Hosted two accelerator programmes in collaboration with 1337 Ventures and KPMG Malaysia that focused on the development of sustainable technology-based solutions to advance Malaysia's sustainability and financial inclusion agenda
- Startups with the best solutions were awarded cash prizes and advisory support to further develop their proposals. The programmes focused on four key areas: Enabling Green Finance, Driving Financial Inclusion, Shaping Sustainable Behaviour, and Innovating Environmental, Social, and Governance Systems

Source: Bank Negara Malaysia, adapted from a publication by EY

[1] The Financial Markets Committee was established in 2016 to engage with the financial market industry and to review and formulate comprehensive strategies for the wholesale financial markets.

Malaysia continues to adopt a multiple-rate approach, with the Kuala Lumpur Interbank Offered Rate (KLIBOR) and Malaysia Overnight Rate running in parallel. As such, we have maintained the publication of one-, three-, and six-month KLIBOR tenors to provide market participants the flexibility to price financial products based on an active underlying market. The Bank also re-appointed 11 KLIBOR submitters for 2023-2024. Guided by the KLIBOR Rate Setting Policy Document issued in September 2021, these submitters will ensure KLIBOR remains robust and representative of conditions in the underlying market.

Principal Dealers (PDs) are critical in ensuring the stability and development of the financial markets. PDs help to build a stable and dependable source of demand for securities. They provide liquidity in the secondary market by devoting capital resources to absorb an occasional shortfall in liquidity. They also build distribution channels and provide market information which includes prices, volumes, and spreads between bids and offers. In 2022, the Bank reviewed the Principal Dealership Framework to ensure its relevance. Key enhancements to the Principal Dealership Framework include a greater focus on financial market development, increased incentives for contributing to market liquidity and transparency, and the promotion of healthy competition.

Enhancing Access to Financial Products and Services

Enhancing financial access points

Agent banks are an important element in achieving our financial inclusion goals. They provide convenient access to essential financial services, particularly for remote communities. These services include cash deposits and withdrawals, fund transfers, bill payments, and prepaid top-up transactions. In June 2022, the Bank revised its Agent Banking Policy Document to expand the scope of financial services offered by agent banks. Agent banks can now facilitate the opening of banking accounts via e-KYC protocols, undertake money services business, distribute microinsurance and microtakaful products, and conduct e-money cash-in and cash-out activities. The expanded scope of agent banks is expected to have sizable positive effects on financial inclusion in Malaysia (Diagram 3).

Agent banks are now available in almost all *mukim* (sub-districts) in Malaysia.

In addition to existing agent banks, the Bank collaborated with the industry to introduce the Bank Bergerak Initiative. Mobile banks (*bank bergerak*)[2] have helped to widen access to essential banking services in underserved areas, including providing advisory services[3] and catalysing the adoption of digital financial services. As at end-2022, a total of 19 mobile banks have been deployed, covering 39 underserved *mukim* in seven states in Malaysia. Mobile banks facilitated the opening of more than 3,182 new banking accounts and over 31,970 transactions valued at RM29.5 million.

Ensuring continuous access to finance for businesses and entrepreneurs

Malaysian FIs continue to support the recovery of small and medium enterprises (SMEs) by providing needed financing. This helps SMEs manage cashflow needs and make capital investments to expand their businesses. As at end-2022, outstanding loans and financing from the banking system to SMEs expanded by 5.0% (2021: 5.7%)[4]. More than RM154 billion in financing was approved for about 230,000 SME accounts (2021: RM131 billion to about 196,000 accounts). Disbursement activity recorded double-digit expansion, with a total of RM505 billion channelled to SMEs (2021: RM399 billion).

To support SMEs impacted by nationwide floods during the year, the Bank activated the Disaster Relief Facility 2022 (DRF 2022). The DRF 2022 provided urgent financing for SMEs to mitigate the fallout from the floods. Such financing was used for repairs and replacement of damaged assets, such as plants and machinery, and any additional working capital. As at end-December 2022, participating FIs approved over RM200 million under DRF 2022 in financing to support more than 500 SMEs and microenterprises.

2 In June 2021, the Government announced an RM18 million allocation for the Bank Bergerak Initiative under Pakej Perlindungan Rakyat dan Pemulihan Ekonomi (PEMULIH). The objective was to enhance access to basic banking services in underserved areas with limited financial access points across Peninsular Malaysia, Sabah, and Sarawak.

3 The financial advisory services provided by mobile banks include raising awareness of digital financial services and financial scams, on-boarding to digital financial services by downloading FIs' mobile banking app, and explaining the benefits of various financial products, including insurance/takaful, particularly Perlindungan Tenang, etc.

4 All loan/financing data from the banking system and development financial institutions are based on updated statistical reporting requirements and may not be directly comparable to the data reported in previous publications.

Diagram 3: Agent Banking Services in Malaysia

Key Performance Indicators of Agent Banking
(End-December 2022)

% of Served *Mukim* (sub-districts)	Participating Financial Institution (PFIs)	% of State Legislative Assembly Served	Number of Transactions
96.2%	**6 PFIs**	**100%**	**255.5 million**
(2011: 46.4%)	(2011: 2 PFIs)	(2011: 72.9%)	(2012: 3.1 million)

Source: Bank Negara Malaysia

BNM's Fund for SMEs (BNM's Fund) further complements the banks' effort to support SMEs' financing needs. We also aim to incentivise and crowd-in private financing into identified new growth areas. During the year, BNM's Fund underwent changes to more firmly support SMEs' recovery and future growth. In February 2022, we introduced two new funds. The Business Recapitalisation Facility assists SMEs in restructuring or increasing their working capital funding, while the Low Carbon Transition Facility supports SMEs in transitioning to low carbon and sustainable operations. The High Tech Facility – National Investment Aspirations was also enhanced and rebranded as the High Tech and Green Facility. This is aimed to support eligible SMEs to make investments that can help spur economic growth, particularly in areas such as digital technology, green technology, and biotechnology.

With these additional and enhanced financing facilities, the total financing available through BNM's Fund increased to RM31.1 billion in 2022 from RM9.1 billion in 2019. In 2022, RM22.6 billion (2021: RM19.4 billion) of financing was approved for more than 65,000 (2021: 53,000) SMEs, with disbursements amounting to RM20.1 billion (2021: RM16.4 billion). See Diagram 4 for further details on the type of facilities available under BNM's Fund.

Social finance is envisioned to be a key driver of social development in Malaysia. It complements public sector finance and commercially driven financial solutions to promote greater social resilience. One example is iTEKAD[5]. Since its pilot phase in 2020, the number of participants and business sectors has steadily grown. In 2022, the iTEKAD programme expanded to include nine participating banks, up from three in the previous year. Together with their implementation partners, these banks have committed to onboard more than 4,000 new iTEKAD participants and mobilise almost RM40 million of diverse social finance funds (including donations, zakat, and social impact investment) in 2023. iTEKAD has delivered tangible benefits to its participants. This includes improvements in business growth, sustained employment, financial resilience, and digital adoption. (See Diagram 5)

The launch of iTEKAD has provided the Bank and FIs with many valuable insights. Given the increasingly important role of social finance, FIs will need to deploy comprehensive strategies along the social finance value chain, from onboarding participants, upskilling participants, funding, and impact monitoring to realise its full potential (Diagram 6). The Bank, on its part, will continue to play an active role in supporting the industry to broaden the outreach and success of social finance programmes like iTEKAD.

Promoting inclusive financial product offerings

Insurance and takaful protection can provide valuable support in times of need, especially for households or individuals with insufficient savings and financial buffers. Perlindungan Tenang (PT) products provide protection against unexpected financial losses and adverse life events. It meets the

[5] iTEKAD is a blended social finance programme which provides seed capital, structured training and microfinancing. iTEKAD targets low-income segment of aspiring and existing microentrepreneurs.

Diagram 4: List of Facilities Under BNM's Fund for SMEs

Facilities under BNM's Fund for SMEs: Total allocation of RM31.1 billion*

To ease affected SMEs' cashflows while supporting recovery and growth of targeted segments

Purpose	Allocation	Facility	Target
On-going needs	RM5.7 bn	All Economic Sectors Facility (AES)	All sectors
On-going needs	RM2.0 bn	Agrofood Facility (AF)	Agriculture sector
On-going needs	RM0.5 bn	Micro Enterprise Facility (MEF)	Collateral-free financing
Relief	RM8.0 bn	Targeted Relief and Recovery Facility (TRRF)	Services sector
Relief	RM0.6 bn	PENJANA Tourism Financing (PTF)	Tourism sector
Relief	RM0.5 bn	Disaster Relief Facility (DRF)	Flood relief
Recovery	RM1.0 bn	SME Automation and Digitalisation Facility (ADF)	All sectors, for upscaling
Recovery	RM0.8 bn	High Tech and Green Facility (HTG)	High tech and innovative sectors
Recovery	NEW RM1.0 bn	Business Recapitalisation Facility (BRF)	Financing mixture, including equity
Recovery	NEW RM1.0 bn	Low Carbon Transition Facility (LCTF)	Low carbon and sustainability financing

*RM10 billion allocated for Special Relief Facility has been fully utilised and closed for application

Source: Bank Negara Malaysia

Diagram 5: Key Performance Indicators of iTEKAD

ACHIEVEMENTS IN 2022

Key Performance Indicators of iTEKAD

Expansion of iTEKAD through collaboration between participating financial institutions and implementation partners resulted in:

1,595
micro-entrepreneurs **enrolled** from all 14 states
2021: 172

9
number of participating financial institutions
2021: 3

1,054
participants have **completed** the iTEKAD programme

41% (male)
59% (female)

17
business sectors

- Programmes with focus on new economic sectors - agriculture, pre-franchise
- Expanded target segments - unipreneurs, single mothers

RM8.5 mil
total financing and investment disbursed
2021: RM2.2 mil

RM9.8 mil
total social finance funds mobilised
2021: RM0.8 mil

Key Impact Indicators from iTEKAD microentrepreneurs

Impact among iTEKAD participants are tracked through four key dimensions:

Business growth
- 46% generated average monthly **sales** more than **RM4,000**

Employment
Microbusinesses **retained** and **created** jobs:
- 30% self-employed
- 55% retained 1 to 2 employees
- 15% retained 3 employees or more
- 40% of businesses hired at least 1 new employee

Financial resilience
- 71% saved on average up to **RM4,000** of business income per month

Digital upskilling
- 92% conduct **online sales and marketing**
- 92% accept and make **e-payments** for business transactions

Note: Figures are derived from sample of iTEKAD participants.

Source: Bank Negara Malaysia, participating financial institutions of iTEKAD

Diagram 6: Opportunities for Optimisation Along the Social Finance (SF) Value Chain

Key insights

Screening and onboarding of participants
- Improve awareness among target segment, fund providers, and potential implementation partners
- Transition away from manual screening process to reduce resource intensiveness

Upskilling and upward migration of participants
- Increase capacity to train large number of participants concurrently
- Provide holistic support to participants including integration into supply chain

Funding
- Raise SF funds more efficiently at retail level
- Complement funding needs with use of alternative funds and BNM Fund's Micro Enterprise Facility

Impact monitoring and disclosure
- Customise impact disclosure practice to quantify impact of different programme structures
- Alleviate need for extensive on the ground resources required for data collection

Roles of FIs moving forward

Ensure efficiency of SF programme roll-out
- Expand and diversify network of implementation partners to scale up implementation nationwide
- Mobilise blended finance to lower financing cost
- Offer user-friendly platform for public and private funders to channel SF funds

Increase awareness of SF among key stakeholders
- Promote SF – including iTEKAD – through various communication channels
- Inspire public confidence through success stories from participants of SF

Introduce innovative solutions within SF
- Expedite onboarding of participants with digital solutions
- Use SF instruments for indebted low-income microentrepreneurs and as a guarantee on microfinancing
- Adopt digital solutions (e.g. mobile app) for self-reporting of impact by participants

Source: Bank Negara Malaysia

principles of being affordable, accessible, provides good value, and is easy to understand, buy, and claim. In 2022, the PT initiative grew significantly (Diagram 7) with 4.9 million insurance policies/takaful certificates purchased (2021: 1.7 million) and RM12.4 million in claims paid (2021: RM10.2 million). This was enabled through a fit-for-purpose regulatory framework and the Government's Perlindungan Tenang Voucher (PTV) programme[6] introduced since 2021. The PT regulatory framework encouraged insurers and takaful operators (ITOs) to diversify both their product offerings to encourage general products, and distribution channels to include non-traditional channels. This improved consumer choice and accessibility to PT products. The Government's PTV programme encouraged vulnerable groups to purchase and experience insurance and takaful protection, which they otherwise might not have been interested in.

The PTV programme has highlighted the importance of good sales practices, particularly by intermediaries. Some ITOs had gaps in their oversight over distribution partners who interfaced with PTV recipients. This has resulted in complaints on unauthorised voucher redemptions from consumers. These ITOs were required to undertake remedial actions and conduct more robust due diligence of their PT partners prior to appointment. They were also required to ensure more effective monitoring and quality checks on sales practices, customer onboarding, and disclosure processes of their PT partners.

A demand-side study to support the future growth of a sustainable microinsurance and microtakaful market was completed in 2022. Jointly commissioned by the Bank and the insurance and takaful industry, the study provided greater insights on the protection needs and consumption behaviours of three emerging segments in Malaysia – gig workers, young millennial families, and sales and services workers (Diagram 8). To complement the demand-side study, macro data on the mySalam[7] scheme's experience with hospitalisation and critical illness claims were shared with ITOs. This provided ITOs with a better understanding of claims behaviour amongst the typical target segments of the microinsurance and microtakaful market. Such information will facilitate ITOs in designing and introducing more needs-based microinsurance and microtakaful products. It will also help ITOs to develop suitable consumer education programmes to sustain future demand.

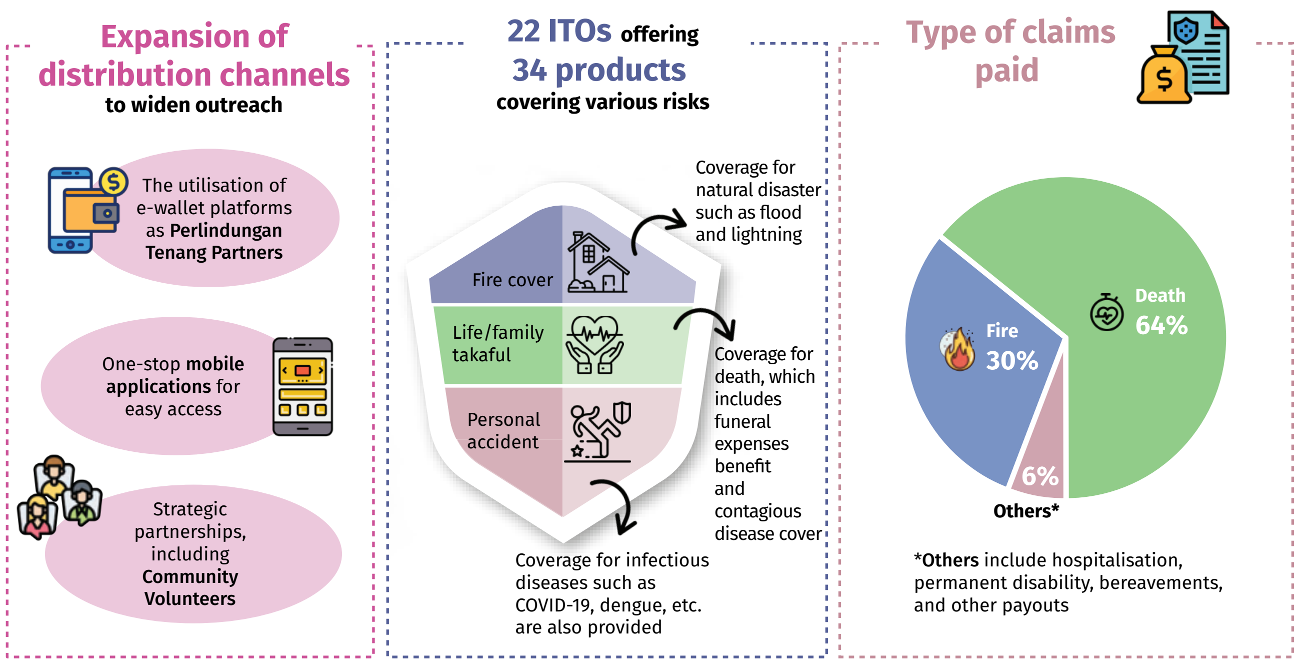
Development financial institutions (DFIs) as key enablers to enhance inclusivity and access to financing

In 2022, outstanding DFI financing grew by 1.1% to RM163.4 billion (2021: 3.6% to RM161.6 billion), mainly in the household, construction, and manufacturing

[6] PTV programme provides eligible Bantuan Keluarga Malaysia recipients with a RM50 voucher in 2021 and RM75 voucher in 2022 to purchase or renew PT products.

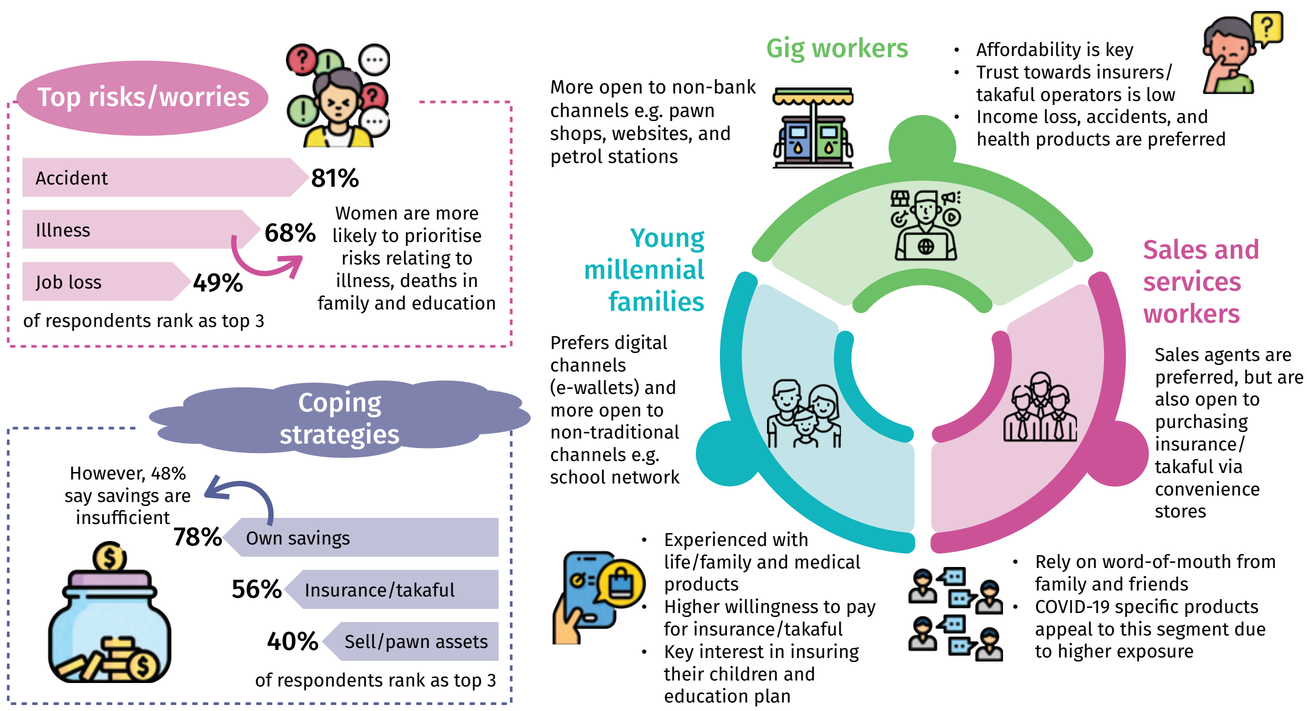
[7] mySalam is a free takaful income assistance scheme by the Government which provides takaful protection for eligible individuals, including individuals who receive special government assistance payments.

Diagram 7: Performance of Perlindungan Tenang



Source: Insurance Services Malaysia

Diagram 8: Key Outcomes from a Demand-side Study Jointly Commissioned by the Insurance/Takaful Industry and the Bank



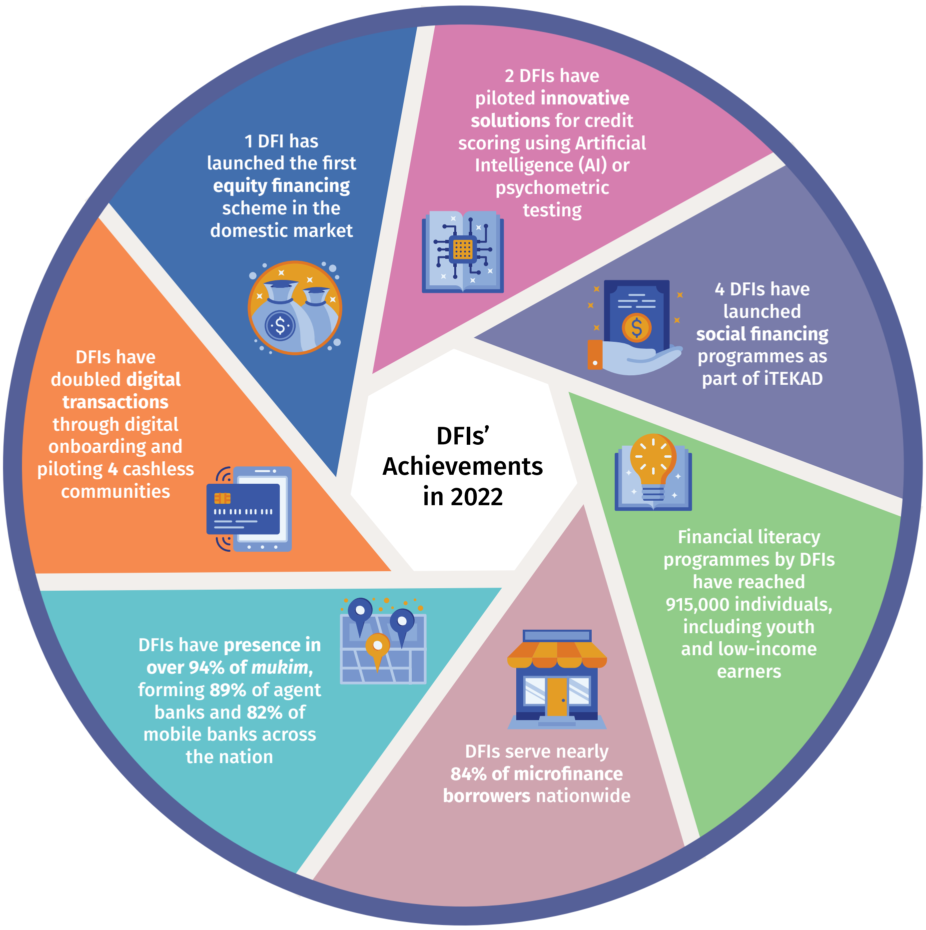
Source: Bank Negara Malaysia

sectors. New financing approved by DFIs grew markedly by 16.3% (2021: -2.4%), which reached 630,000 low-income borrowers and 31,000 SMEs, including start-ups and first-time borrowers. DFIs also remain as the main credit provider for microenterprises, constituting 84% of total microfinance accounts. Supported by financing from DFIs, over 10,000 businesses achieved higher turnover and about 3,700 businesses upscaled its operations, creating and retaining an estimated 131,000 jobs in the economy in 2022. Other key achievements of DFIs are summarised in Diagram 9 below.

During the year, the Bank supported DFIs in their efforts to innovate products and develop solutions that bridge gaps in financial inclusion. We facilitated regular engagements between DFIs and fintech companies. This was to encourage exploration of solutions to instil a savings habit, provide equity financing, and enhance credit assessment methods for "thin-file" customers using Artificial Intelligence/ Machine Learning or other credit scoring methods (e.g. psychometric analysis). We also facilitated DFIs in launching social finance programmes through iTEKAD to extend reach to underserved segments.

To improve the impact and effectiveness of DFIs in promoting financial inclusion, we focused on the implementation and enforcement of the Performance Measurement Framework (PMF) introduced in 2018 (Diagram 10). We worked closely with DFIs to refine their PMF-related governance, systems, and resources. This resulted in improved reporting of baseline impact indicators by DFIs and more meaningful application of PMF to track long-term developmental outcomes. This enabled the Bank to provide more holistic interventions where needed. The PMF also prompted DFIs to take proactive action to enhance its outreach and crowd-in private sector financing for underserved industries (e.g. new growth areas, microenterprises, social enterprises, green financing) and borrower segments (e.g. vulnerable segments, "thin-file" customers).

Diagram 9: Snapshot of Development Financial Institutions (DFIs) Achievements in 2022



Source: Bank Negara Malaysia

Diagram 10: Four Additionalities Monitored Under the Performance Measurement Framework (PMF)

One of the core result areas of the PMF is additionality creation, which is the increase in social value that would not have occurred under a fully commercial environment.

Financial additionality

DFIs' contribution towards closing financing gaps, providing countercyclical financing, and other support to strategic sectors and underserved segments, e.g. increase in the value of financing approved to first-time borrowers.

Demonstration additionality

DFIs' contribution in building private sector capability by demonstrating the growth potential of target segments to attract private sector investments, e.g. increase in value of financing crowded-in through guarantees or syndicated loans.

Design additionality

DFIs' contribution towards socio-economic development and building customer resilience using impactful design features, e.g. increase in the number of customers that have improved their business resilience.

Policy additionality

DFIs' contribution towards public policy design and public sector capabilities, e.g. proposal for state governments to develop the digital infrastructure in an unserved area to enable the delivery of financial services to the local community.

Source: Bank Negara Malaysia

Catalysing structural reforms

During the year, the Bank worked closely with the financial industry and other stakeholders to introduce key reforms for the Malaysian insurance and takaful sector. These reforms are designed to promote positive consumer outcomes. The commitment of diverse stakeholders is required to ensure these reforms are implemented successfully and are effective in delivering a better consumer experience.

The general ITOs have committed to the vision of establishing an end-to-end digital motor insurance and takaful claims settlement system by end-2026. Almost all general ITOs are committed to implement the first phase of reforms, namely to have digital roadside assistance solutions by end-2023. Information on the Bank's motor reforms journey is featured in the article "Driving into the Future-A Digital Motor Claims Journey". These reforms will enhance customer experience and confidence, reduce claims leakages and fraud, as well as pave the way for the continued liberalisation of motor and fire tariffs.

The Bank is steadfast in pursuing structural reforms within the medical and health insurance and takaful (MHIT) industry. This is in tandem with the Minister of Health's efforts to pursue broader reforms that will improve Malaysia's healthcare system. Our objective is to ensure MHIT protection remains accessible and sustainable in the long run. To this end, we issued an Exposure Draft on MHIT Business in December 2022. The Exposure Draft sets out prevailing expectations for ITOs to observe fair and responsible business conduct practices towards consumers. The Exposure Draft also proposes for ITOs to develop MHIT products with cost-sharing element to counter rising claims inflation and maintain affordability of premiums. The Exposure Draft recommends ITOs to enhance the collection and standardisation of MHIT claims data to support better cost control management and transparency of MHIT cover. This is further supported by digital solutions such as a MHIT claims data exchange platform to be developed and piloted by the industry in 2023. The platform will enable greater industry-wide claims analysis and pave the way forward for the future publication of healthcare costs, which can enable consumers to make easier cost comparisons and informed choices.

Going Forward

In 2023, the Bank will continue to ensure that the Malaysian financial sector remains progressive in responding to emerging market developments and inclusive in serving the existing needs of the nation. Our initiatives will be consistent with developmental and regulatory priorities outlined in the Financial Sector Blueprint 2022-2026.

The digitalisation of financial services will accelerate as technological advancements continue to grow. The Malaysian financial sector must continue to meet milestones in its ongoing digital transformation journey. In support of this, the Bank will be finalising the licensing framework for DITOs and preparing for the commencement of operations of the country's first five digital banks.

The strength of the national digital infrastructure sets the foundation for the digitalisation of financial services. Hence, advancing the development of the digital infrastructure in Malaysia will have cross-sectoral and nationwide benefits. This includes efficiency gains to both financial consumers and businesses alike who utilise digital financial services. We will carry on working with FIs and relevant government agencies to pilot more open data use cases. At the same time, we will also continue to advocate the implementation of a National Digital Identity framework.

An inclusive financial sector helps to foster financially strong and resilient households, communities, and economy. It is therefore critical to set out a clear vision for advancing financial inclusion strategies. Efforts are ongoing to engage stakeholders for feedback on the Discussion Paper on the Financial Inclusion Framework 2023-2026 (FIF). Following this, we plan to finalise the second edition of FIF later this year. The FIF outlines medium-term initiatives to elevate the financial well-being and standard of living of Malaysians. This includes clarifying ways to ensure public access to affordable financial solutions and empower consumers to make sound financial decisions.

Driving into the Future - A Digital Motor Claims Journey

In 2022, the Bank continued to call on general insurers and takaful operators (ITOs) to improve customers' claims experience and outcomes by going digital. This is in line with aspirations set out in the Bank's Financial Sector Blueprint 2022-2026.

Why go digital?

There are various pain points in the motor insurance and takaful claims process in Malaysia. At the scene of an accident or vehicle breakdown, consumers may be exposed to harmful practices. Unsolicited parties who show up at an accident scene often take advantage of accident victims by pressuring them to allow their vehicles to be towed away without notifying the relevant ITOs, or deal with unknown parties to handle aspects of the claim. Victims may be made to pay fees for these actions. Damaged vehicles towed to workshops of unknown repute also raise safety concerns from the use of non-genuine parts or sub-standard repairs. These unhealthy practices will ultimately contribute to greater risks of insurance fraud and exaggerated claims due to inflated costs of repairs and parts. Additionally, manual claims processes have often led to long turnaround times to approve and settle claims. Digital solutions like web or mobile apps can address many of these issues. By linking each party within the claims process, digitalisation can provide consumers a more efficient and seamless experience.

Towards a transformative customer experience

Collaboration both across ITOs and with key parties in the claims value chain is crucial to reshape an end-to-end digital motor claims journey. The desired outcome is a faster, more transparent and better claims experience for customers. To this end, a five-year digitalisation roadmap (2022-2026, Diagram 1) has been rolled out for the insurance and takaful industry to complement efforts to transform the motor claims ecosystem. The Bank continues to engage and work collaboratively with stakeholders, including insurtechs[1], relevant government agencies and authorities, consumer groups and service providers, in pursuing the key initiatives outlined under the roadmap.

What can consumers expect?

ITOs are anticipated to deliver more innovative value propositions to their customers. Between 2023 and 2024, most ITOs are expected to deploy Digital Roadside Assistance (DRA) solutions via the web and mobile apps. This will enable consumers to conveniently manage all aspects of their claims journey (Diagram 2) digitally – from notifying an ITO of the accident to receiving the repaired vehicle. Amongst ITOs, greater use of technology such as telematics, data analytics and process automation will further improve the speed, efficiency and accuracy of claims processes, while better controlling fraud. For instance, telematics can notify ITOs automatically when an accident occurs and help initiate the claims process for the consumer. Efforts by ITOs to educate consumers on DRA and encourage its usage will also be ramped up to improve customers' awareness and capability in managing claims processes.

[1] Insurtech is a combination of the word "insurance" and "technology". It refers to the innovative use of technology to improve business processes, efficiency and customer experience in the current insurance and takaful business model including administration, underwriting, distribution and claims.

Diagram 1: A 5-year Roadmap for the Motor Insurance and Takaful Claims Ecosystem

Industry engagement and strategic communications (2022–2023)

- **Strengthen standards on conduct of ITOs** on motor claims settlements to support reforms
- Engage insurance and takaful industry on **action plans to achieve the desired outcomes** under the roadmap
- Multi-year **consumer education and awareness programmes** by ITOs focusing on:
  - Consumer rights
  - Claims submission process
  - Importance of going through authorised providers and repairers

Digitalisation roll out and industry commitments (2024)

- Roll out **Digital Roadside Assistance (DRA)** solutions for customers
- Allow customers to digitally select workshops and monitor **geolocation of tow trucks**
- Enable customers to **submit claims digitally** and be updated on progress of claims and repairs
- Establish a code of conduct for repairers and an **independent framework to resolve disputes**

Industry coordination with stakeholders (2025–2026)

- **Awareness campaigns to promote use of digital solutions** to empower consumers
- Coordinate with car manufacturers to enable **automated accident detection sensors**
- Collaborate with public agencies to implement **online police reporting system for accidents**
- **Digitise and automate** assessment of loss/damages

Desired outcomes

Timeliness	Transparency	Transformative Customer Experience

Motor lab hosted by the Bank and the Fintech Association of Malaysia, with 125 delegates represented by CEOs, heads of claims/digital transformation and insurtechs

Source: Bank Negara Malaysia

Diagram 2: Customer Journey for an End-to-end Digital Motor Claims Process via a Mobile App

STEP 1

Request for DRA via web and/or mobile app

Do not panic in the event of the accident or breakdown. Remember that the DRA is now a click or call away and touts do not have any rights to your vehicle. Capture photo and video evidence to support any investigation or claims.

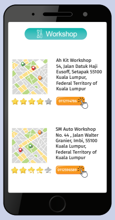
Check for details of tow trucks (e.g. licence plate number) and keep track of their location and expected arrival time.

STEP 2

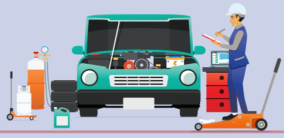
Monitor registered tow truck's location in real time

STEP 3

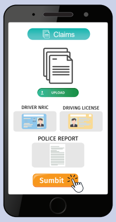
Choose preferred workshop from list of authorised repairers



Inform your ITO or assistance provider about your workshop preference or select from the list of panel repairers.



Log into your ITO's website or mobile app to submit your claim documents.

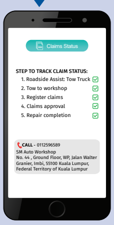


STEP 4

Lodge accident reports digitally, including upload of photo and video evidence

STEP 5

Keep track of claims and repairs status via mobile app and/or SMS notifications



Repaired vehicle ready for pick up upon notification from your ITO or repairer.

Note: The above diagram is for illustration only. The actual user interface may vary across participating ITOs.

Source: Bank Negara Malaysia

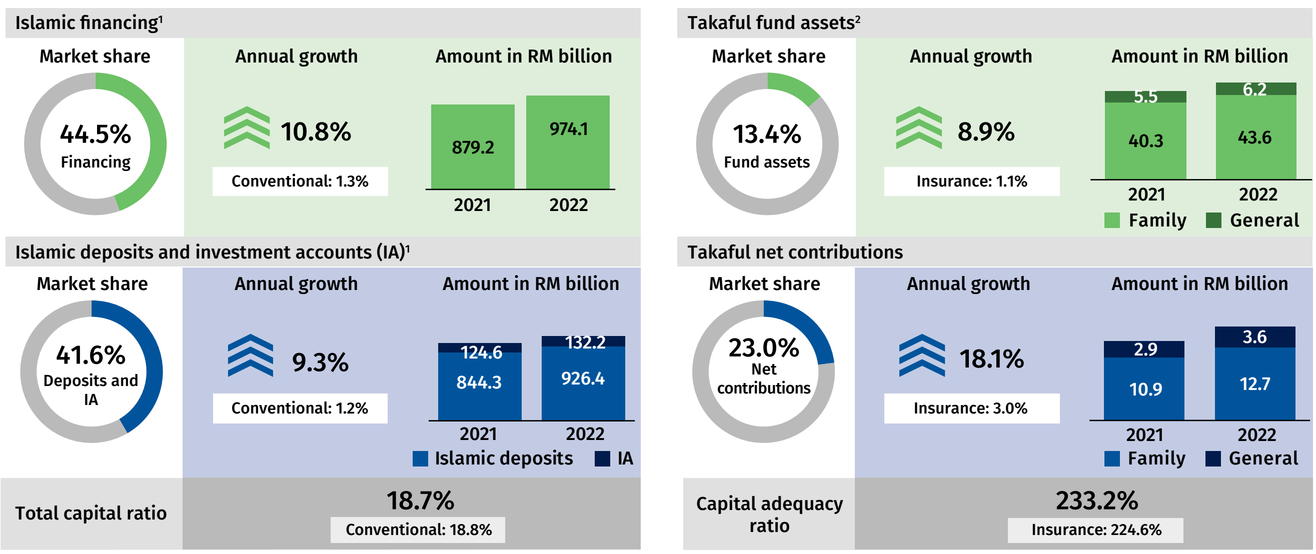
Promoting a Progressive and Inclusive Islamic Financial System

The Bank's focus is to strengthen the contribution of the Islamic financial system in supporting socio-economic developments and advance Malaysia as an international gateway for Islamic finance.

In 2022, the Bank focused on strengthening the role of Islamic finance in supporting a sustainable economic recovery. We worked closely with the industry to advance value-based finance to bring greater impact to the economy, community and environment. We also rallied efforts to sustain Malaysia as a global leader in Islamic finance. These efforts are aligned with the development priorities for Islamic finance as outlined in the Financial Sector Blueprint 2022-2026.

The Islamic banking and takaful industry sustained its growth in 2022, gaining further share of the overall financial system. The industry also remained resilient with strong capital buffers to support intermediation activities (Diagram 1). This has enabled the industry to strongly support the funding needs of businesses including micro, small and medium-sized enterprises (SMEs), as well as households. Wider financial protection was also provided to various communities (Diagram 2).

Diagram 1: Growth of Islamic Banking and Takaful Industry in 2022



Notes: [1] Includes development financial institutions.
[2] Not inclusive of the shareholders' fund assets.

Source: Bank Negara Malaysia

Diagram 2: Islamic Finance Key Initiatives and Contributions in 2022

Key Initiatives In Line with Desired Outcomes of Blueprint

Finance for All

- 2 successful applicants for digital Islamic banking licences
- 16 takaful products under Perlindungan Tenang

Finance for Transformation

- 64 government vendors benefitted from CAKNA scheme, a non-debt funding facility for endorsed invoices
- Launched Malaysia Islamic Overnight Rate (MYOR-i), the first transaction-based Islamic benchmark rate in the world
- Established the MIFC Leadership Council (MLC) as an industry-led platform to enhance Malaysia's propositions as a global marketplace and international gateway for Islamic finance

Finance for Sustainability

- RM302.2 billion in VBI-aligned initiatives since introduction of VBI strategy

Islamic Finance Contributions

A. Increasing Financial Inclusion

20.1%	Sustained penetration rate of family takaful (2021: 18.6%)
24.7%	Sustained growth in financing disbursed to microenterprises and SMEs (2021: 27.6%)

B. Supporting the Economy

9.4%	Higher household financing growth to meet household demand (2021: 8.9%)
11.9%	Higher business financing growth to meet business demand across economic sectors (2021: 8.8%)
RM185 bil	Higher sukuk issuance to fund real economic sectors (2021: RM153 billion)
1.2%	Sustained Islamic finance contribution to Malaysia's GDP (2021: 1.2%)

Source: Bank Negara Malaysia, Department of Statistics Malaysia, AIBIM (2021) *Value-based Intermediation Full Report*, AIBIM (2020) *Inaugural Islamic Banking Industry Value-based Intermediation Preview Report 2017-2020*

Supporting Sustainable Economic Recovery and Transformation

Expanding access to CAKNA to ease SMEs' cash flow management

Our initiatives during the year were directed to help businesses rebound and grow amid a recovering economy. Following the successful SME liquidity pilot scheme for Government vendors (CAKNA)[1] in 2021, the scheme was expanded to include another six Ministries and two additional participating banks. The second phase of this pilot scheme caters for a wider group of SME vendors in supporting their business resilience (Diagram 3). The non-debt nature of this facility ultimately helps SME vendors to access needed cash flows for their business operations without increasing their debt level.

Advancing halal trade and business

The halal sector has been recognised as one of the high-impact sectors that can drive growth of Malaysia's economy.[2] The sector is expected to contribute 8.1% to Malaysia's Gross Domestic Product (GDP), with an export revenue of RM56 billion by 2025. Islamic finance has made notable progress in supporting halal businesses over the years. The use of Islamic finance solutions by halal-certified companies has almost doubled since 2018 (2021: 41.3%; 2018: 21.9%).[3] This success was due to a range of efforts by the industry and the Bank. These include offering tailored business solutions, promoting close partnerships between halal-related government agencies (such as Jabatan Kemajuan Islam Malaysia (JAKIM), Halal Development Corporation and Department of Standards Malaysia), as well as continuous engagements and awareness programs conducted all year round.

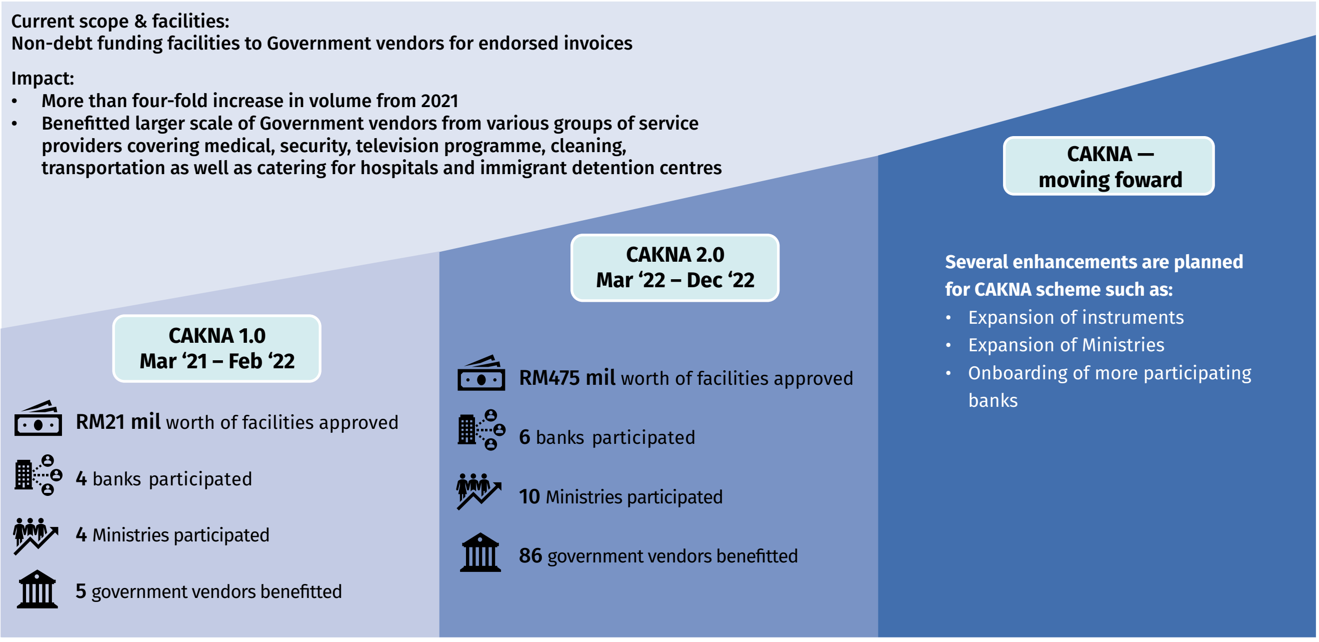
This year, the Bank worked closely with the World Bank in issuing a research report on "Islamic Finance and the Development of Malaysia's Halal Economy". The report provided six policy recommendations to advance halal economy (Table 1). The Bank is committed to work with the industry to implement these recommendations. This includes ensuring that Islamic finance is more integrated with the halal economy, particularly in financing halal trade and investment.

[1] CAKNA is a pilot liquidity scheme for vendors with government procurement contracts. The scheme aims to ease cash flow constraints by allowing vendors to exchange approved invoices for advance payment, at a discount before the invoice maturity date. Further information on CAKNA is available at https://www.bnm.gov.my/documents/6319173/d2d36f2a-3230-77ec-9886-b888e3519321/

[2] Source: Economic Planning Unit (2021) *Twelfth Malaysia Plan 2021-2025*

[3] Source: World Bank Group (2022) *Islamic Finance and the Development of Malaysia's Halal Economy*

Diagram 3: Pilot Phases of CAKNA Scheme – Impact and Performance



Source: Bank Negara Malaysia

Table 1: Policy Recommendations to Enhance Malaysia's Halal Economy

Recommendations	Stakeholders
Enhance policy and strategy coordination across different policymakers and Islamic finance providers to increase the impact of programmes.[1]	Government agencies, financial regulators, Islamic finance providers and SMEs.
Establish closer linkages between programmes that support innovation and productivity improvements with Islamic finance.[2]	Government agencies, Islamic finance providers, SMEs and research centres.
Encourage Islamic finance providers, particularly Islamic banks, to participate in public-private sector collaborations to pilot innovative Islamic finance solutions and scale-up.	Government agencies, financial regulators, Islamic finance providers and SMEs.
Strengthen collaboration with policymakers in other countries to advance the utilisation of Islamic finance for halal economy.	Government agencies and financial regulators.
Enhance the role of relevant institutional investors and expanding capital market funding for halal economy.	Government agencies, financial regulators, Islamic finance providers and institutional investors.
Enhance data sharing on Islamic finance and halal economy.	Government agencies and financial regulators.

Notes:

1 This includes steamlining strategies under various public-private sector partnerships to avoid duplication of resources and optimise impact to beneficiaries. For example, strengthening linkages between halal-related government agencies, financial providers and ecosystem enablers (technology companies and e-commerce) to offer comprehensive solutions to halal companies.

2 Greater involvement of private sector to encourage successful implementation of technology adoption among SMEs. Islamic financial institutions, for example, could offer advisory services in addition to transition finance to halal SMEs to transform their business to become more sustainable and less carbon-intensive.

Source: World Bank Group (2022) *Islamic Finance and the Development of Malaysia's Halal Economy*

Pioneering Islamic transaction-based benchmark rate

In March 2022, the Bank launched the Malaysia Islamic Overnight Rate (MYOR-i), replacing Kuala Lumpur Islamic Reference Rate (KLIRR). This is the first Islamic transaction-based benchmark rate in the world that complies with the Principles for Financial Benchmarks.[4] The launch of MYOR-i will spur the development of innovative Shariah-compliant financial products which will further deepen Malaysia's Islamic financial market. It will also reinforce a holistic Shariah-compliant ecosystem and enhance best market practices. The Islamic transaction-based benchmark rate would improve pricing transparency and efficiency

4 The Principles was developed by the International Organization of Securities Commissions (IOSCO) to provide an overarching framework of principles for benchmarks used in financial markets.

among market players. This will help to further boost public confidence in the Islamic financial market and enhance its role in financing economic activities in Malaysia.

The development of the benchmark rate was pursued in collaboration with the Financial Markets Committee[5] and the Islamic Market Technical and Development Committee. The Bank will review MYOR-i periodically to ensure it remains relevant and reflective of the Islamic interbank market pricing.[6]

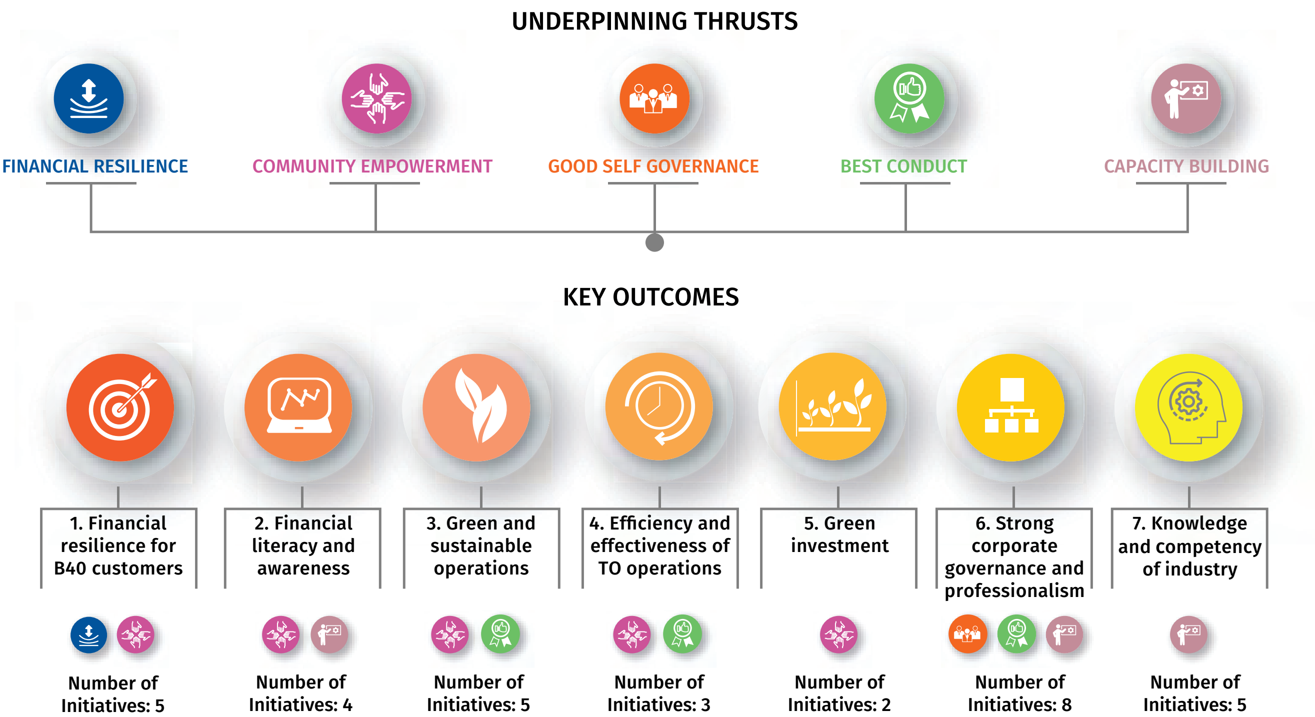
Strengthening Value-based Finance for Sustained Impact

Building on steady progress in recent years, the Bank continued to strengthen its partnership with the industry to further develop value-based finance in Malaysia. Since the introduction of Strategy Paper on Value-based Intermediation (VBI) in 2017, the Islamic finance industry has facilitated a total of RM302.2 billion in VBI-aligned initiatives.[7] Value-based finance activities are driven by consideration of its contribution and impact on wider stakeholders. This includes supporting the climate and sustainability agenda. Value-based finance activities are also underpinned by good self-governance and best conduct of the Islamic financial institutions (IFIs).

Promoting the climate and sustainability agenda
Following issuance of the Value-based Intermediation for Takaful (VBIT) Framework in 2021, the Malaysian Takaful Association (MTA) and VBIT Steering Committee developed the VBIT Roadmap. The roadmap was launched during the seventh Global Islamic Finance Forum (GIFF).[8] It highlights seven key focus areas that aim to strengthen the role of the takaful industry in building the financial resilience of Malaysians (Diagram 4). It also provides a guide for takaful operators (TOs) to achieve the desired outcomes of VBIT and proposes initiatives to achieve VBIT goals by the TOs. The roadmap is meant to give clarity and serves as a tool for the TOs to track progress and ascertain the impact of strategies and initiatives based on VBIT's underpinning thrusts.

The Bank is also working closely with IFIs to align our climate efforts with industry-driven value-based finance initiatives. In February 2022, the Community

Diagram 4: Key Outcomes of VBIT Roadmap



Source: MTA (2022) *Value-based Intermediation for Takaful Roadmap*

[5] The committee is established by the Bank in May 2016, with representation from financial institutions, corporations, financial service providers and other institutions who have prominent roles or participation in the financial markets.
[6] The MYOR-i is calculated based on volume-weighted average of Shariah-compliant unsecured overnight MYR interbank placements.
[7] Source: AIBIM (2021) *Value-based Intermediation Full Report*, AIBIM (2020) *Inaugural Islamic Banking Industry Value-based Intermediation Preview Report 2017-2020*
[8] Further information on GIFF will be covered in later part of this chapter under "Supporting global initiatives".

of Practitioners[9] issued the second cohort of Value-based Intermediation Financing and Investment Impact Assessment Framework (VBIAF) sectoral guides. This cohort covers oil and gas, construction and infrastructure, and manufacturing sectors. They are aimed to help financial institutions to assess the impact of their financing and investment decisions in these sectors. The third cohort of sectoral guides – covering agriculture, mining and quarrying, transportation, and store and waste management – is expected to be finalised by 4Q 2023. These guides will include practical use cases to highlight synergies between the VBIAF sectoral guides and the Climate Change and Principle-based Taxonomy (CCPT). This in turn will help financial institutions address climate-related risks in respective economic sectors.

The Bank is also working with the industry and the World Bank to refine VBI impact measures. This aims to ensure fair and meaningful impact reporting and avoid impact-washing.[10]

Fostering Trust and Empowering Financial Consumers

Efforts to empower and foster trust among Islamic financial consumers were focused on three priority areas:

- Developing Shariah rulings that resolve contemporary issues;
- Strengthening financial safety nets; and
- Advancing digitalisation of Islamic financial services.

Developing Shariah rulings that resolve contemporary issues

The Shariah Advisory Council of Bank Negara Malaysia (SAC) continues to provide Shariah rulings that guide Islamic financial business, operations and conduct within the operating environment in Malaysia. This role of SAC is essential to sustain a credible Islamic financial system as it continues to evolve and mature. In 2022, several issues were deliberated and concluded by the SAC. These deliberations clarify the permissibility of Islamic financial transactions and facilitate the adoption of diverse Shariah contracts (Diagram 5).

Strengthening financial safety nets

During the year, the number of takaful operators participating in the Perlindungan Tenang (PT)[11] initiative expanded to ten (2021: seven). Five new PT takaful products were introduced and several enhancements were made to existing products (total PT takaful products: 16). Collectively, these products offer consumers diverse and affordable protection in the event of death, hospitalisation, critical illness, fire or personal accidents. In response to the pandemic, takaful coverage for death due to COVID-19 or side effects from COVID-19 vaccination were made available. The year also saw the introduction of the first fire takaful product under PT. In addition to protection against risk of loss due to fire, this product also provides flood protection for consumers residing in disaster-prone areas. To reach a wider target segment, these PT products are distributed through various channels including online platforms, bancatakaful, e-Wallet providers and other corporate agents. Further details on these developments can be found in the chapter "Promoting a Progressive and Inclusive Financial System".

Advancing digitalisation of Islamic financial services

Out of the five successful digital bank applicants announced in April 2022, two applicants are to be licensed under the Islamic Financial Services Act 2013 (IFSA). The Bank is currently engaging with the successful applicants to ensure they are operationally ready to start their licensed business. This is part of our efforts to expand meaningful access to, and promote responsible usage of, suitable financial solutions to unserved and/or underserved segments. Similarly, we are working towards further expanding the scope of digital financial players with the issuance of the Exposure Draft on Licensing and Regulatory Framework for Digital Insurers and Takaful Operators. Further details on these developments can be found in the chapter "Promoting a Progressive and Inclusive Financial System".

9 Community of Practitioners (CoP) is a collaborative platform for industry players to strategically advance industry-wide implementation of VBI agenda. To date, 15 Islamic banks are members of CoP.

10 Refers to practices where negative impact from an activity is disguised or masked as having positive impact.

11 Perlindungan Tenang is an initiative that aims to expand the availability and quality of insurance and takaful solutions to meet the needs of the unserved and underserved segments in promoting their financial and social resilience. Products that qualify under the Perlindungan Tenang initiative must meet five key principles – affordable; easily accessible to the target segments; provide good protection value; easy to understand; and easy to purchase, make nomination and to make claims.

Diagram 5: Highlights of Shariah Deliberations by SAC in 2022

Product Innovation

Buy Now Pay Later (BNPL) scheme

- Provides clarity on Shariah compliance status of BNPL with application of appropriate Shariah contracts.
- The underlying Shariah contracts will govern the rights and obligations of contracting parties.

Offering takaful coverage on an established online platform for travel and leisure activities

- Mitigates potential reputational risk by restricting the purchase of takaful on the platform to Shariah-compliant activities only.

Industry Practices

Experience refund[1] benefit offering by family takaful operators to corporate clients under employee benefit business/ scheme

- Serves the best interest (*maslahah*) of takaful participants by rewarding good claims experience.
- Further expands the range of takaful solutions in the market which serves as Shariah compliant alternatives to consumers.

Impact of prohibition of *rahn* product with *qard* element to *ujrah* concept in credit card-i

- Review of current practices for computing fees charged for retail purchases under *ujrah*-based credit card-i.

Shariah Non-Compliance

Restricting profit recognition by Islamic financial institution, either wholly or partly, due to delay or failure to rectify Shariah non-compliant activities

- Actions taken are in line with the principle of *siyasah shar`iyyah* (Shariah public policy) and *maqasid* Shariah (objectives of Shariah) with the objective to manage Shariah non-compliant cases and promote strong compliance culture.

Market Infrastructure

Prescribing collateralised *murabahah* (CM) transaction as the qualified financial transaction and agreement under the Netting of Financial Agreement Act 2015

- Serves as a Shariah compliant risk management mechanism to enhance liquidity in the collateralised financing market and reduce risk exposures of Islamic financial institutions.

Proposed variation to the Master Agreement for the Bank's Small and Medium Enterprises (SME) Fund

- Involves application of two Shariah contracts to operationalise both financing structures, either with profit (*murabahah tawarruq*) or without profit (*tawliyah tawarruq*).
- Avoids uncertainty (*gharar*) by ensuring that the funds channelled from the Bank to the Islamic financial institutions are based upon one type of financing only, as agreed by contracting parties at a specified time.

Note:
[1] Refers to payment of benefits to participants with good claims experience.

Source: Bank Negara Malaysia

Deepening Cross Border Linkages and Advancing Malaysia's Global Leadership

Over the years, Malaysia has been recognised as one of the leading markets in Islamic finance.[12] Our efforts have been focused on building effective market infrastructure and creating a conducive environment for the sector's growth. For the year, we are focused on the following to advance Malaysia's continued leadership in Islamic finance:

- Strengthening cross border collaboration for mutual respect on Shariah views;
- Fostering greater industry stewardship; and
- Supporting ongoing global initiatives.

[12] Based on ICD-Refinitiv Islamic Financial Development Indicator (IFDI) 2022, Malaysia has been consistently ranked first for 10 consecutive years. The indicator is a composite weighted index that measures the overall development of the Islamic finance market.

Strengthening cross border collaboration for mutual respect on Shariah views

The Bank pioneered a global network of Shariah scholars known as the Centralised Shariah Advisory Authorities (CSAA). It aims to strengthen global connectivity and foster mutual respect on Shariah views across jurisdictions. Support for the network continues to grow, with the number of participating countries more than double since its first meeting in 2018 (2022: 18 countries; 2018: 7 countries).

In October 2022, the CSAA held its fourth meeting in Abu Dhabi. The meeting was attended by more than 40 Shariah scholars and Islamic finance experts from 12 countries. The meeting discussed on the challenges, practices and considerations underpinning the Shariah principles for exigent circumstances (*hajah*). The meeting also discussed the important role of Shariah boards in supporting innovation for social and sustainable development, amid evolving operating landscape. The article on “Fostering International Connectivity among Central Shariah Boards in Islamic Finance” showcases the progress and future expectations of CSAA.

Fostering greater industry stewardship

While early developments of Islamic finance in Malaysia have been largely regulator led, industry players have played greater role in driving the industry’s growth over the years. To further advance Malaysia as an International Islamic Financial Centre (MIFC) and provide greater industry stewardship, we partnered with the Securities Commission Malaysia (SC) to establish the MLC in October 2022. The formation of MLC marks an important milestone in elevating the industry to lead the MIFC agenda. The article on “MIFC Leadership Council: Galvanising Greater Industry Stewardship” showcases the mandate and expected outcomes of the MLC.

Supporting global initiatives

Throughout the year, the Bank actively took part in international platforms and events as well as lent our support for global capacity building in Islamic finance (Diagram 6).

The Bank jointly organised two Islamic finance flagship events in 2022. We collaborated with SC to confer The Royal Award for Islamic Finance and partnered with AIBIM for the seventh GIFF – a prestige event that aims to bring together top minds and scholars in deliberating future strategies for the global Islamic finance industry. These events that took place in the fourth quarter of 2022 centred on value-based innovations and digital solutions.

With the theme “Take the Reins”, GIFF highlighted the role of Islamic finance in advancing digitalisation, sustainability and social finance. The event, which was organised in a hybrid format, attracted nearly

Diagram 6: Key International Partnerships and Initiatives in Islamic Finance

Continuous commitment towards global Islamic finance regulatory development

- Member of IFSB Council, Deputy Chairperson of Executive Committee and Member of Technical Committee
- Member of the IILM Governing Board, Member of Board Executive Committee, Chairperson of Board Audit Committee and Member of Board Risk Management Committee

More details on the Bank’s contribution in the committees can be found in the chapter “International Engagements”

Support capacity building and knowledge sharing in Islamic finance

- Extended capacity building support to regulatory authorities in other jurisdictions e.g. Indonesia, Philippines, Uganda and Mauritania in strengthening Islamic finance ecosystem in their countries
- Shared Malaysia’s experience in developing Islamic finance at international events and workshops e.g. UNDP Islamic Finance International Thought Leadership Forum, 4th IFSB Innovation Forum, Islamic Finance News Islamic Sustainable Finance & Investment Forum 2022, 17th Kuala Lumpur Islamic Finance Forum and COMCEC’s workshop on 'Best Practices on Promoting Financial Literacy and Islamic Finance in the OIC Member Countries'

Participate and facilitate intellectual discourses on Islamic finance

- Participated in international discussions with a focus on advancing Islamic finance contributions, innovation and digitalisation e.g. 4th Meeting of the OIC-COMCEC Central Banks Forum and 18th Meeting of the Standing Committee for Economic and Commercial Cooperation (COMCEC) Financial Cooperation Working Group
- Involved in the Global Islamic Finance Forum 2022 by collaborating with AIBIM as the host to design programme structure focusing on areas of future growth and impact creation
- Presented the Bank’s Discussion Paper on *Hajah* (exigent circumstances) at the 4th Roundtable Meeting of Centralised Shariah Advisory Authority (CSAA) hosted by the Central Bank of the UAE in Abu Dhabi on 11 October 2022

Organisation of the Royal Award for Islamic Finance 2022 to recognise Islamic finance contributions at the global level

- Conferment of the RAIF, Emerging Leader Prize and Impact Challenge Prize (see details in Diagrams 7 and 8)

Source: Bank Negara Malaysia

3,000 participants from over 35 countries. Other than the launch of the VBIT Roadmap, GIFF also featured the launch of the Value-based Intermediation Full Report 2021 by AIBIM.

The Royal Award for Islamic Finance 2022 was conferred by His Majesty the Yang di-Pertuan Agong to Tan Sri Dr. Mohd Daud Bakar, for his significant contributions to the growth of Islamic finance globally (Diagram 7). This year's award received 49 submissions for 37 nominees from 14 countries, including Islamic finance practitioners, Shariah scholars and academicians.

Two new award categories, the Emerging Leader Prize (ELP) and the Impact Challenge Prize (ICP) were introduced this year. These awards recognise and celebrate young leaders in Islamic finance and innovative solutions that deliver positive impact on a global scale. The ELP received 18 submissions from eight countries, while the ICP received 50 applications from 14 countries. The ICP was jointly organised with the World Bank Group Inclusive Growth and Sustainable Finance Hub in Malaysia and the Malaysia Digital Economy Corporation (Diagram 8).

Diagram 7: Recipient of The Royal Award for Islamic Finance 2022

Recipient of The Royal Award 2022
recognising outstanding contributions in Islamic finance

THE ROYAL AWARD FOR ISLAMIC FINANCE™

Tan Sri Dr. Mohd Daud Bakar

Tan Sri Dr. Mohd Daud Bakar is a prominent Shariah scholar and Islamic finance entrepreneur. Globally known for his contributions in Shariah advisory, Tan Sri Dr. Mohd Daud Bakar's illustrious career encompasses numerous Shariah board positions at major international financial institutions, organisations and financial sector regulators.

Diagram 8: New Award Categories, Winners and Respective Contributions

Emerging Leader Prize (ELP)
recognising young talent with outstanding innovations in Islamic finance

Umar Abdullah Mahmud Munshi
Co-founder and Group Managing Director of Ethis Group

Facilitated impact investments
- ✓ Funding from over 50 countries
- ✓ Channelled to fund SMEs and social housing projects
- ✓ Medium through Islamic fintech and crowdfunding platforms

Impact Challenge Prize (ICP)
recognising innovative solutions based on Islamic finance principles, which can improve the economic and social resilience of financially impacted communities globally

Duithape, Indonesia

Facilitated disbursement of Shariah compliant microfinancing for SMEs via bio-metric cashless payment system

Pod, Malaysia

Established digital platform that provides gig workers with;
- ✓ Access to Shariah microfinancing
- ✓ Facilitates alternative credit scoring

Source: Bank Negara Malaysia

Going Forward

Our priorities in 2023 will build upon the ecosystem strength of Islamic finance in Malaysia, and to elevate its contribution to all stakeholders. In addition to continuing current initiatives, we will focus on:

- Modernising Shariah contract applications to spur impactful innovations;
- Piloting more value-based solutions; and
- Strengthening ecosystem enablers to advance Islamic finance developments.

To realise the full potential of Islamic finance, the whole ecosystem needs to align with its values, with strong leadership from the industry. Altogether, this would further advance "value-based growth" – one that is balanced, progressive, sustainable and inclusive.

Fostering International Connectivity among Central Shariah Boards in Islamic Finance

Malaysia is one of the first countries in the world to establish a central Shariah board in Islamic finance in the central bank.[1] Since its formation in 1997, the Shariah Advisory Council of Bank Negara Malaysia (the SAC) has been instrumental in providing Shariah certainty for the Malaysian Islamic financial industry. Over the years, the Shariah rulings issued by the SAC have continued to play a key role in supporting the orderly development of the Islamic financial system in Malaysia – by encouraging innovation while promoting confidence in the integrity of financial solutions based upon Shariah tenets.

The important role of central Shariah boards in preserving the sanctity of Shariah and sustaining public confidence has gained more traction globally. From three pioneering countries in the 1990s, there are now 20 countries with central Shariah boards in Islamic finance (refer to Diagram 1). The institutional structures, roles and mandates of central Shariah boards vary across countries, reflecting the size and complexity of the Islamic finance industry as well as the local operating landscape in these countries.

Diagram 1: Countries with central Shariah board in Islamic finance

1990 - 1999

- Central Bank of Sudan established Supreme Shariah Board in 1992
- Bank Negara Malaysia established Shariah Advisory Council in 1997
- Majelis Ulema Indonesia established Dewan Syariah Nasional in 1999

2000 - 2009

- Central Shariah Board for Islamic Banks of Bangladesh is a national non-profitable corporate body established in 2001
- State Bank of Pakistan established Shariah Advisory Committee in 2004
- Syariah Financial Supervisory Board of Brunei Darussalam Central Bank was established in 2006

2010 - 2015

- Maldives Monetary Authority established Shari`ah Council in 2010
- The Central Bank of Nigeria established Financial Regulation Advisory Council of Experts (FRACE) in 2013
- Central Bank of Libya established Central Sharia Supervisory Board in 2013
- Central Bank of Oman established High Sharia Supervisory Authority in 2014
- Da Afghanistan Bank established Shariah Supervisory Board in 2014
- Shariah Committee for Participatory Finance formed under Morocco's Supreme Council of Ulema in 2015
- The National Shari'ah Committee of Banque Centrale de Djibouti was established by a presidential decree in 2015
- Central Bank of Bahrain established Centralised Shariah Supervisory Board in 2015

2016 - 2022

- The Central Bank of the United Arab Emirates established Higher Shari'ah Authority in 2017
- Central Sharia Advisory Board formed under the Participation Banks Association of Turkey (TKBB) in 2018
- Higher Sharia Supervisory Board was established by Palestine Monetary Authority and Palestine Capital Market Authority in 2019
- The National Fatwa Authority for the Islamic Finance Industry established under High Islamic Council of Algeria in 2020
- Central Bank of Kuwait established Higher Committee of Shariah Supervision in 2020
- Shari'ah Supervisory Board in the Bangsamoro Autonomous Region in Muslim Mindanao was established by Bangko Sentral ng Pilipinas in 2022

Sources: Bank Negara Malaysia and official website of respective financial regulatory authorities and central Shariah boards

[1] The central Shariah board in Islamic finance refers to the national-level Shariah board that is established to deliberate on Shariah matters in Islamic finance.

The evolving and more integrated global financial system calls for stronger connectivity among central Shariah boards

Looking ahead, Islamic finance holds significant untapped potential to support economic growth, empower trade and the digital economy, as well as build social and climate resilience. In tandem with this, Shariah issues have, and will continue to become more complex with implications beyond domestic borders. Against this backdrop, stronger connectivity among the central Shariah boards of various jurisdictions is needed to enable exchange and mutual recognition of best practices and formulation of well-founded Shariah solutions that can meet current and future economic and social needs.

In pursuit of greater connectivity and mutual recognition in Shariah, the inaugural Centralised Shariah Advisory Authorities in Islamic Finance (CSAA) meeting was held in 2018. The meeting marked the creation of an international networking platform among the central Shariah boards of various jurisdictions to deliberate current and emerging Shariah issues, with the aim of tapping into diverse perspectives and experience to support the sound and orderly development of Islamic finance globally.

The first CSAA meeting organised by the Bank in 2018. From left: Deputy Governor Abdul Rasheed Ghaffour, Tan Sri Dr. Mohd Daud Bakar, the former Chairperson of the SAC of the Bank and the late Sheikh Dr. Abdul Sattar Abu Ghuddah, the former Chairperson of the Centralised Shariah Supervisory Board of the Central Bank of Bahrain.

The fourth CSAA meeting hosted by the Central Bank of the United Arab Emirates (UAE) on 11 October 2022. The Bank's delegates led by Prof. Dr. Ashraf Md Hashim, the Chairperson of the SAC were among key presenters, sharing the Bank's recently published Discussion Paper on Hajah (exigent circumstances) that outlines proposed parameters for application of hajah by Islamic financial institutions. - Photo courtesy of the Central Bank of the UAE

In recent years, CSAA has helped strengthen the capacity of central Shariah boards in addressing emerging challenges via series of exchange of knowledge, experience and best practices. The discussions conducted by the CSAA seek to address:

(a) common Shariah issues (for instance, the Shariah considerations in the implementation of assistance measures to reduce the financial hardships of the customers who were adversely affected by the pandemic - such as the application of the principle of fairness (*`adl*) and beneficence (*ihsan*)); and

(b) critical Shariah policies with long-term developmental impact on Islamic finance growth, innovation and stability (refer to Diagram 2).

Diagram 2: The Nature of Discussions in the CSAA Meetings has Evolved to Meet the Current Needs of Participating Countries

First Meeting *2 October 2018* *Central Bank of Malaysia (Kuala Lumpur)*	**Second Meeting** *11 May 2020* *Central Bank of UAE (virtual)*	**Third Meeting** *21 December 2021* *Central Bank of Malaysia (virtual)*	**Fourth Meeting** *11 October 2022* *Central Bank of UAE (hybrid)*
Exchange of knowledge and experience in the **set-up of central Shariah board for Islamic finance** • Shariah governance framework • Reference (e.g. queries) from court and arbitrator	Exchange of views and Shariah rulings on regulatory measures taken by respective countries in **addressing the impact of COVID-19 pandemic** • The regulatory measures include moratorium and the utilisation of dedicated funds to assist affected individuals	Discussion on the **important role of central Shariah boards in mainstreaming Islamic finance,** and a sound framework to ensure quality Shariah boards	Discussion on the **importance of Shariah guide on *hajah* (exigent circumstances)** to provide tools for Islamic financial institutions to manage risks and innovate continuously within evolving operating landscape, harmonisation and diversification of Shariah contracts and the role of the central Shariah board towards sustainability goals

Source: Bank Negara Malaysia and the Central Bank of the UAE

Role of CSAA Moving Forward

The different Shariah practices across jurisdictions are attributable to several factors including the differences in scholarly opinions to account for the practicality and implementation of Shariah rulings in addressing the needs and interest (*maslahah*) of society.[2] Such differences are an accepted facet in Islamic jurisprudence. Through the CSAA, the central Shariah boards are envisioned to forge greater understanding, respect and acceptance of various Shariah practices to unlock the full potential of Islamic finance for the mutual benefit of the Islamic financial ecosystem globally. This is supported by continuing efforts to strengthen the mechanism and governance of CSAA to assume a more prominent role in the future. Shariah opinions generated through CSAA discussions would be another source of reference by financial regulatory authorities, global *fatwa*-issuing bodies and international standards-setting organisations.

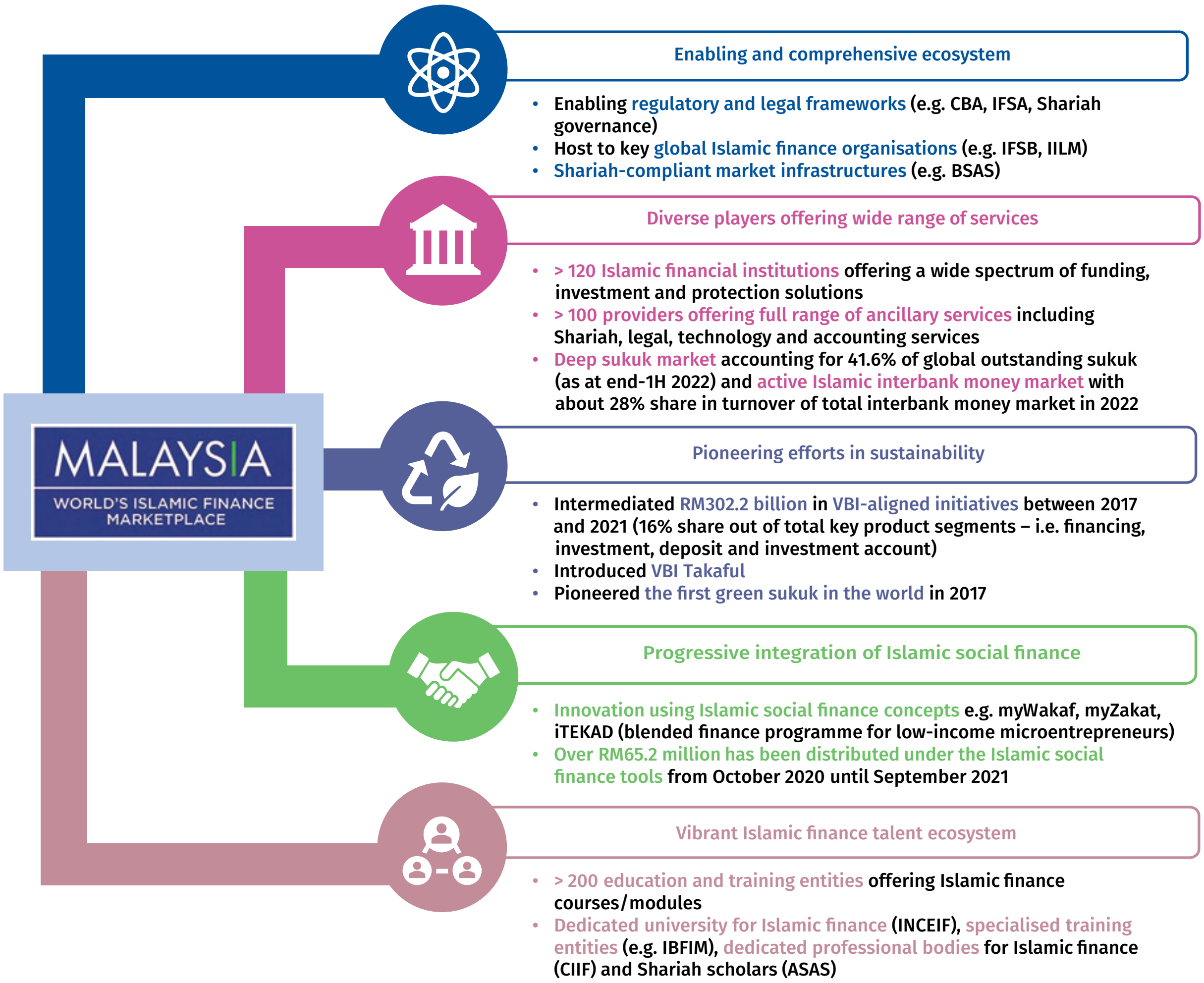
It is envisaged that CSAA will continue to develop as a strong global networking platform supporting the sustainable growth of Islamic finance, anchored by a shared purpose and mind-set to harness the collective wisdom of the participating central Shariah boards. These are important pre-requisites to ensure both CSAA and the participating countries can effectively respond to emerging Shariah risks and optimise opportunities in Islamic finance. With stronger connectivity and collective stewardship, CSAA will be able to contribute towards strengthening the global Islamic finance ecosystem.

[2] For instance, in Malaysia, the mandatory inclusion of a rebate clause (*ibra'*) in Islamic financing agreements is allowed to preserve fairness and contractual certainty as well as to mitigate moral hazard. Such ruling safeguards consumers' interest especially in judicial proceedings.

MIFC Leadership Council: Galvanising Greater Industry Stewardship

Since the launch of MIFC[1] initiative in 2006, Islamic finance in Malaysia has evolved into one of the most developed ecosystems with diverse solutions and resilient players (Diagram 1).[2] Globally, Islamic finance is now present in over 130 countries with total assets valued at USD4 trillion marking a 17% annual growth in 2021.[3] The industry is expected to grow further to USD5.6 trillion by 2026.[4] With its comprehensive Islamic finance ecosystem, Malaysia is well positioned to capitalise on the promising growth opportunity of the industry globally. A key priority is to strengthen Malaysia's proposition as an international gateway and thought leadership for Islamic finance and its ecosystem. This includes enhancing connectivity of market participants, businesses and investors to Islamic finance opportunities in Asia and the OIC.[5] Focus is also given on exporting expertise and solutions in areas such as sustainable finance, halal trade facilitation and Islamic fintech.

Diagram 1: Comprehensive Islamic Finance Ecosystem in Malaysia



Notes: VBI – Value-based Intermediation, ASAS – Association of Shariah Advisors in Islamic Finance, CIIF – Chartered Institute of Islamic Finance Professionals, BSAS – Bursa Suq Al-Sila' (a commodity trading platform to facilitate Islamic liquidity management and financing by Islamic financial institutions), IBFIM – Islamic Banking and Finance Institute Malaysia.

Source: BNM, AIBIM Value-based Intermediation (VBI) Preview Report 2017-2020 and Full Report 2021 (based on member banks' submission), ICD – Refinitiv Islamic Finance Development Indicator Report 2022, MIFC website and estimate.

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[1] Malaysia International Islamic Financial Centre (MIFC), is an initiative launched on 14 August 2006 to position Malaysia as an international Islamic financial hub.

[2] ICD – Refinitiv Islamic Finance Development Indicator 2022 (IFDI); World Bank: Islamic Finance and the Development of Malaysia's Halal Economy Report 2022; The State of the Global Islamic Economy Report 2022 by DinarStandard with the support of Dubai Economy and Tourism (DET).

[3] ICD – Refinitiv Islamic Finance Development Report (IFDI) 2022.

[4] ICD – Refinitiv Islamic Finance Development Report (IFDI) 2022.

[5] Organisation of Islamic Cooperation (OIC).

In support of this, the Bank and Securities Commission Malaysia (SC) initiated the establishment of the MIFC Leadership Council (MLC) in October 2022[6] (Diagram 2). The MLC is an industry-led platform to advance MIFC propositions as a global marketplace and international gateway for Islamic finance. The MLC aims to provide stronger industry ownership in championing the MIFC agenda. This is in step with the more mature Islamic financial system in Malaysia. It also manifests a shift from stronger regulatory-led arrangements in the earlier stages of MIFC's development. MLC is supported by a dedicated Secretariat. In 2023, MLC will focus on activating several work programmes. This includes positioning Malaysia as the preferred Islamic fund raising and investment destination, addressing inequality, promoting sustainability, elevating human capital and knowledge as well as digital empowerment.

Diagram 2: Mandate, Membership and Intended Outcomes of MIFC Leadership Council

Mandate

"Strategy" "Action" "Advocacy"

A platform to lead the development and promotion of MIFC by identifying international opportunities, industry strategic priorities and monitoring industry initiatives. This includes accelerating the implementation of initiatives that will:

- Nurture new ideas, strategies or initiatives;
- Deepen and diversify strategic linkages between domestic and international partners; and
- Deliver industry thought leadership.

Members

Prominent local and international industry figures as well as representatives from BNM and SC.

Tan Sri Azman Mokhtar (Chairperson)

Tan Sri Andrew Sheng

Dato Dr. Nik Ramlah Mahmood

Dato Paduka Iqbal Ahmad Khan

Dato' Mohammad Faiz Azmi

Datuk Abdul Rasheed Ghaffour

Dato' Abdul Rahman Ahmad

Rejina Rahim

Sharifatul Hanizah Said Ali

Notes:
Puan Sharifatul Hanizah Said Ali was appointed to the MLC as SC representative to replace Datuk Zainal Izlan Zainal Abidin, the former Deputy Chief Executive of SC.

Intended outcomes

- Improved global competitiveness of Malaysia's Islamic finance industry to tap opportunities outside Malaysia
- More financial innovation delivering positive impact to economy, community and environment
- Deepen financial linkages and international partnerships
- Sustained global thought leadership in Islamic finance

[6] The establishment of MLC was announced at the Global Islamic Finance Forum 2022 on 5 October 2022.

Promoting Safe and Efficient Payment and Remittance Services

Making and receiving payments through digital channels have become much easier and more accessible. With greater advancements in technology, digital payments are now more secure, simple and swift.

The Bank's priority in 2022 was to ensure that payment and money services business (MSB)[1] services remain safe, efficient and reliable. We actively collaborated with the industry to reduce barriers to e-payment adoption and increase public confidence in payment systems. These efforts have sustained the strong growth in digital payment adoption among households and businesses. We have also devoted significant resources towards ensuring the regulatory and supervisory framework, as well as key payment infrastructures, are fit for purpose and well aligned with current and future needs of the economy.

Sustaining Greater Digitalisation of Payment and MSB Services

Key payments and MSB trends

In 2022, e-payment transactions grew by 31.5% (2022: 9.5 billion; 2021: 7.2 billion). This is in line with the continued expansion in private consumption following the recovery in business and tourism activities. On average, each Malaysian made 291 e-payment transactions in 2022 (Diagram 1).

Two-thirds of total card-present transactions are now contactless, while various industry-led initiatives to actively promote adoption of QR code payments as a cost-effective payment method have led to a higher number of merchants, particularly MSMEs, accepting DuitNow QR (2022: 1.6 million merchants; 2021: 1.1 million merchants). With greater convenience provided to users, these developments continue to pave the way for further progress in the adoption of e-payments going forward.

The use of cheques continued to decline during the year (2022: 46.1 million; 2021: 48.3 million). Meanwhile, cash withdrawals from Automated Teller Machines (ATMs), typically used as a proxy for the level of cash usage, grew moderately to 798.5 million transactions valued at RM404.7 billion (2021: 779.6 million; RM386.3 billion). Nevertheless, the annual growth rate of ATM cash withdrawals remained below its pre-pandemic levels[2], suggesting some gradual shift away from cash.

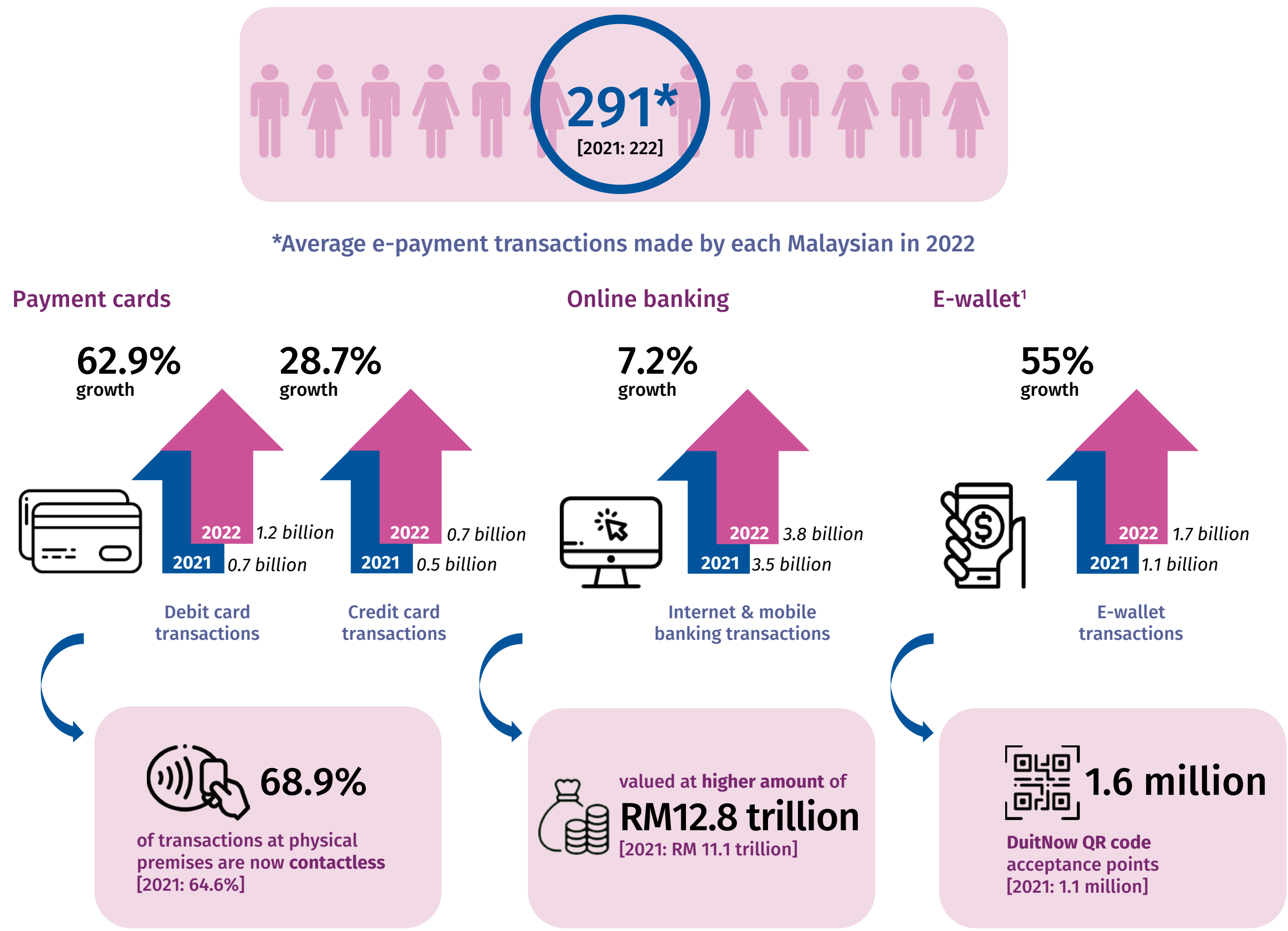
E-remittance services offered by licensed non-bank remittance service providers (RSPs) continued to gain traction among consumers (Diagram 2). They now account for 44.9% of total outward remittances by non-bank RSPs as customers look for ways to send money abroad quickly, conveniently, and at a lower cost. Meanwhile, total outward remittances[3] grew by 10.5% to RM28.5 billion (2021: RM25.8 billion), attributed to higher remittance transactions by foreign workers as the economy began to pick up in 2022. The reopening of the economy also saw the gradual return of international tourists, leading to a significant rebound in the money changing and wholesale currency businesses.

[1] Namely remittance, money changing and wholesale currency.

[2] Between 2015 and 2019, the average annual growth rate for ATM cash withdrawal volume and value were at 4.4% and 4.9%, respectively as compared to 2022 (volume: 2.4%, value: 4.7%).

[3] Offered by non-bank RSPs only.

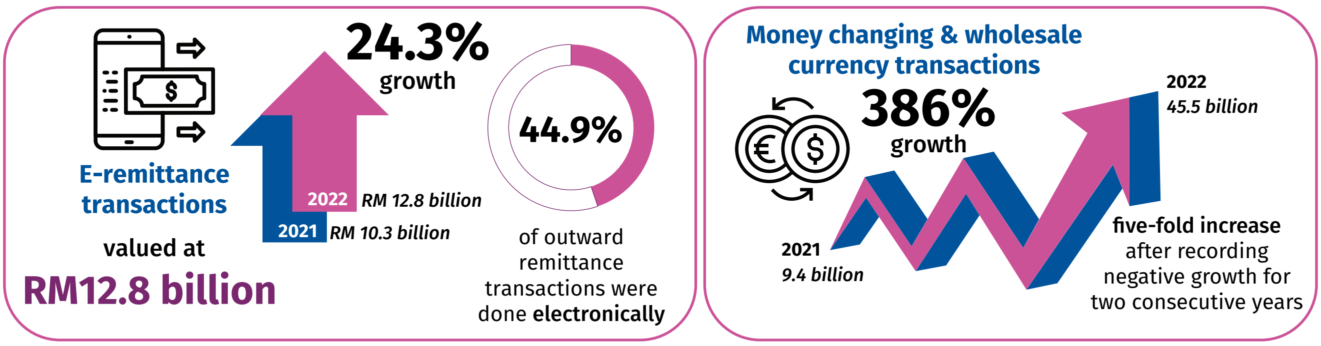
Diagram 1: Snapshot of Digital Payments



[1] Network based e-money which allows users to make transactions via the Internet, mobile phones or other electronic devices

Source: Bank Negara Malaysia

Diagram 2: Snapshot of Money Services Business



Source: Bank Negara Malaysia

Fostering a more vibrant payment ecosystem
The Bank took steps to ensure the regulatory framework supports the development of a vibrant payment ecosystem that is reliable, efficient and innovative.

During the year, we enhanced requirements under the Payment Cards Framework Policy Document[4]. These changes were introduced to encourage wider acceptance of card payments among businesses/ merchants:

(i) The interchange fee[5] ceiling was revised to reflect current processing costs incurred by payment service providers. The maximum interchange fees that may be charged by card issuers aim to ensure that card acceptance remains affordable for merchants, while reasonably covering the direct costs incurred by payment service providers in providing card payment facilities.

(ii) Merchants can now choose the types of payment card they wish to accept. Payment service providers can no longer require merchants to accept all cards issued by them. This will enable merchants to better manage their costs as each payment card is subject to different cost structures.

(iii) Cardholders will benefit from greater transparency on surcharging[6] practices and the minimum transaction amount that may be applied to card payments. As these practices are set by the industry[7], scheme operators, issuers and acquirers are required to improve their respective disclosures, as well as channels provided for cardholders to address complaints over any unfair practices by merchants. In response, the industry has taken steps to increase public awareness and to educate cardholders on their respective rights and the appropriate complaint channels.

With growing innovation in the card space, cardholders can now also authenticate payment card transactions securely via personal devices (such as their mobile phone or smartwatch). This allows for a speedier alternative to entering the customer's Personal Identification Number (PIN) on a payment terminal whilst ensuring appropriate safeguards are in place in line with prudential requirements set by the Bank.

Contactless payment allows customers to pay by scanning their smartwatch with passcode verification on a payment terminal.

[4] Applicable for payment cards, which include debit, credit and prepaid cards.
[5] Interchange fee is the fee payable between the merchant's bank and the cardholder's bank to compensate the cardholder's bank for costs incurred in facilitating a payment card transaction.
[6] A fee imposed by a merchant on a cardholder in addition to the purchase amount for a transaction made using a payment card.
[7] Surcharging and minimum transaction amount are subject to the rules of the scheme operators.

For mobile payments, we observed increased collaborations between e-money issuers (EMIs)[8] and other financial service providers. Customers can now access more financial products on e-wallet applications or platforms – such as remittance, microinsurance, microfinancing and micro-investments. These strategic partnerships are expected to enhance the value proposition of EMIs, and provide broader access to financial solutions for the public, including currently unserved and underserved customer segments.

Since 2020, the Bank has enabled non-bank RSPs to conduct Know-Your-Customer verifications electronically (e-KYC). This has helped overcome a key barrier to the use of formal remittance channels as customers do not need to physically visit the premises of RSPs. It has also enabled RSPs to enhance their digital services offerings. Since then, various new products and business-to-business (B2B) value-added services have been introduced by non-bank RSPs in response to increasing competition (Diagram 3) - benefitting consumers through greater choice, more customised services and competitive costs.

Ensuring Safe and Resilient Payment Services

Policy responses to emerging risks and market development

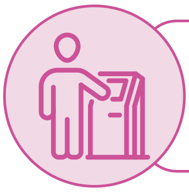
The Bank issued four policy documents in 2022 to strengthen the payment and MSB ecosystem. These policies served to further enhance the safety and efficiency of payment services, strengthen user protection and preserve public confidence. Highlights from these policy issuances are summarised in Diagram 4.

Enhancing oversight on payment services

Both RENTAS[9] (Malaysia's wholesale payment systems) and the major retail payment systems operated by Payments Network Malaysia Sdn. Bhd. (PayNet) remained resilient and recorded a high level of system availability throughout 2022. As part of on-going efforts to ensure resiliency, we undertook several key initiatives to further strengthen our supervisory arrangements. This included-

- Streamlining expectations on RENTAS with risk management standards[10] applicable to other financial market infrastructures (FMI).[11]

Diagram 3: New Digital Products Offered in the Remittance Space



Individual

- **Self-service terminals (SST) to perform non face-to-face remittance transactions and via cashless payments (e.g. debit card or e-wallet)**
- **Overseas ATM withdrawal of remitted funds by Hajj and Umrah pilgrims – via QR code displayed on the ATMs (*to commence by 1H 2023*)**

Corporates (including SMEs)

- **Financial management dashboards to facilitate real-time monitoring of transactions (e.g. settlement) and foreign exchange rates**
- **Higher remittance limit allowed for B2B transactions**

Source: Bank Negara Malaysia

[8] To date, more than 30% EMIs were approved to cross-sell financial products.

[9] Real-time Electronic Transfer of Funds and Securities System.

[10] These include policy documents on Risk Management in Technology, Business Continuity Management and Payment System Operator.

[11] The Bank owns, operates and provides the infrastructure and technology support for RENTAS since 1 July 2021. Under the Principles for Financial Market Infrastructures (PFMI) issued by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO), these principles may be applied differently in exceptional cases where the FMIs are operated by the central bank due to requirements specified in relevant laws, regulations, or policy.

Diagram 4: Policy Documents Issued in 2022

Electronic Money (E-money)

Ensure adequate customer protection to foster continued public confidence in using e-money

- ✓ Introduced new categories of EMIs with prudential requirements that are commensurate with their risk profiles
- ✓ Enhanced prudential requirements to reflect advancements in e-money functionalities and the growing prominence of e-money as a mode of payment

Payment System Operator (PSO)

- ✓ Covers governance, risk management and operational requirements that are broadly aligned with global standards[1]
- ✓ Allows PSOs to demonstrate compliance to the requirements based on existing group structures and practices, subject to appropriate safeguards

Greater oversight on the PSOs that play a critical role in processing, clearing and settling payment transactions

Measures to Enhance the Security of Cash Service Machines including ATMs

Greater flexibility for FIs[2] to effectively manage cash service machines

- ✓ Expanded security measures that FIs may adopt to enhance security robustness of its cash service machines
- ✓ Notification process for FIs to withdraw own ATMs from areas with adequate access to financial services (such as branches and other ATMs) – this promotes efficiency whilst ensuring public access to banking services is not compromised

Agent Oversight Framework for MSB

- ✓ Strengthened principals' oversight responsibilities proportionate to the risk profile of agents
- ✓ Includes enhancing physical controls and security measures for high risk agents and requiring principals to conduct regular review on agents to ensure on-going compliance

Enhance professionalism and service reliability of MSB agents through more effective oversight by MSB principals

[1] Principles for Financial Market Infrastructures (PFMI) by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO)
[2] Financial institutions

Source: Bank Negara Malaysia

- Prescribing the Real-time Retail Payments Platform (RPP)[12] as a designated payment system effective from 10 February 2023 in view of its market share and systemic importance. The designation provides the Bank with the necessary legislative powers under the Financial Services Act 2013 and Islamic Financial Services Act 2013 to take actions where necessary to strengthen the RPP's resilience to financial shocks and operational disruptions. This may include issuing directives to RPP participants and assuming control over the operations of the RPP under exceptional circumstances.
- Enhancing collaborative efforts with Perbadanan Insurans Deposit Malaysia (PIDM) and PayNet. Joint efforts were undertaken to establish coordination arrangements that would preserve continued access to key FMIs in order to enable the orderly resolution of troubled financial institutions.

Our supervisory oversight and thematic reviews were focused on three key areas, namely, the adequacy of cybersecurity controls, effective management of critical service providers (CSPs) and effectiveness of business continuity management (BCM). Control

[12] RPP is a shared payment infrastructure operated by PayNet that facilitates instant and seamless payments between participating bank and e-money accounts.

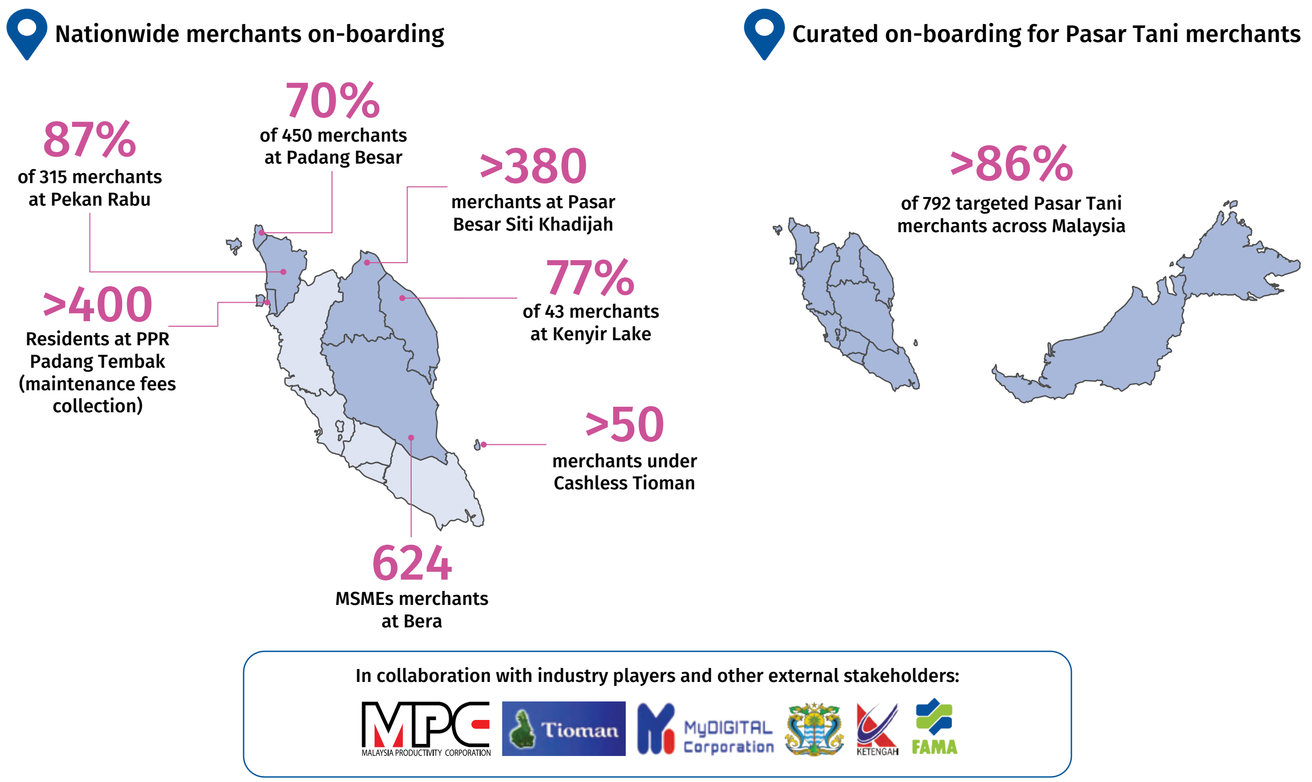
measures by major PSOs were observed to be adequate to ensure high system availability. Major PSOs also continued to strengthen their internal controls, with various initiatives completed as part of a broader roadmap to enhance FMIs' cyber resilience. Such PSOs also continue to enhance their policies and procedures for stronger management of CSPs, in line with recommendations by the CPMI.[13]

The risk and complexities of the payment services landscape have grown with the rapid expansion of retail and cross-border payments. This warranted greater focus on efforts to preserve the safety and integrity of the payment and MSB industries. For instance, product offerings by EMIs, merchant acquirers and MSB licensees may be a conduit for illegal activities including fraud, money laundering and terrorism financing (ML/TF).[14] In 2022, we issued 48 supervisory letters to licensed MSB and approved payment entities. We also closely engaged with the industry to strengthen their compliance level to address gaps in supervisory expectations. For serious contraventions, we took more punitive actions which resulted in nine entities having their authorisations to conduct business revoked by the Bank during the year.

Fostering Greater Public Awareness and Confidence in Payment Services

The Bank remains focused on initiatives to increase digital payment acceptance in Malaysia by preserving confidence in the safety and convenience of making digital payments. These were undertaken in collaboration with payment service providers, federal and local authorities, and stakeholders across various economic sectors – such as retail, education and tourism sectors (Diagram 5).

Diagram 5: Expanded e-Payment Adoption through On-Boarding of New Merchants

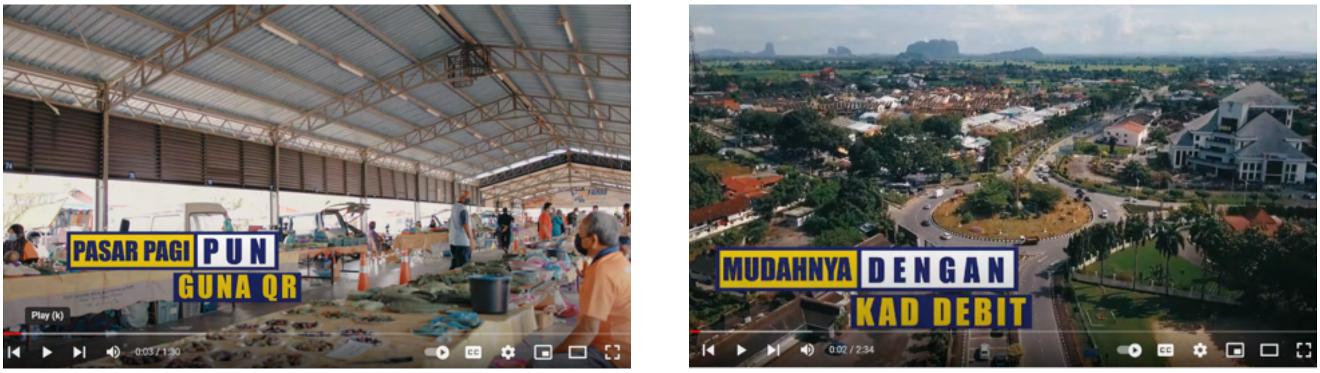


Source: Bank Negara Malaysia

[13] Annex F of the Principles for Financial Market Infrastructures published by CPMI outlines five oversight expectations for CSPs i.e., risk identification and management, information security, reliability and resilience, technology planning and communication with users.

[14] Further details on the sectoral assessment can be found in the BNM Annual Report 2022, Chapter 1.7 Maintaining Financial Integrity.

To complement our existing on-the-ground outreach programmes for targeted communities, the Bank also intensified the use of social media to reach out to the masses to promote the safe use of e-payments. Six awareness videos in local dialects were produced to promote the safe use of e-payments in daily activities. With the reopening of borders and return of international tourism, the public was reminded to only transact with authorised money changers when exchanging currencies and how to identify authorised money changers (Diagram 6).



Videos titled 'Pasar Pagi pun dah Guna QR', 'Mudahnya dengan Kad Debit', and 'Transfer kan Senang' are some of the examples of videos that were uploaded on the Bank's YouTube channel and Sahabat Pantai Timur's Facebook page.

Diagram 6: Ways to Identify Authorised Money Changers

Source: Bank Negara Malaysia

In conjunction with the Financial Literacy Month (FLM) in October 2022, the Bank launched the e-Duit campaign[15] in collaboration with the industry to encourage greater use of e-payments by increasing awareness and educating the public on safe use. This is done through outreach programmes and educational campaigns that highlight the benefits and responsible use of digital payments – secure, simple and swift.

e-Duit campaign launch by Deputy Governor Datuk Abdul Rasheed Ghaffour at exhibition held at IPC Shopping Centre Mutiara Damansara, in conjunction with the closing of FLM 2022

[15] Further details on the campaign can be found in the Bank's website: https://www.bnm.gov.my/eduit

Empowering Communities with Digital Financial Services

The rain has been pouring since last week. Cikgu Har feels restless. She is running out of cash to pay for necessities. She is thinking whether to take the boat ride to Kuala Terengganu in this weather to withdraw cash or accept an offer for someone to withdraw money for her, a practice by some other residents in Pulau Redang.

But she has heard complaints. Hiring someone to withdraw money would cost a lot and sometimes the person withdraws more than what is requested. Cikgu Har also knows that she should not give her ATM card or share her personal identification number (PIN) with anyone. Doing so allows them to access her account.

In another part of Pulau Redang, Kak Zura, an owner of a small grocery store, is also worried. She has been receiving torn and spoiled notes that are not fit for use. She must pay her supplier later in the evening, but she does not have enough cash in hand. She is also afraid of losing her cash given the long walk from her store to the jetty, especially under the watchful gaze of strangers.

Redang: A Cash-less Island

These real-life circumstances motivated the locals in Pulau Redang to embrace digital payments and transformed this tourist hotspot into a cash-less island. The stories also illustrate how adoption of e-payment eased day-to-day payment activities, improved livelihoods, and enhanced efficiency of payments especially in less accessible areas.

Given the challenges faced by the residents of Pulau Redang, the "*Bayo Dok Gune Pitih*" (pay without using cash) programme was introduced on the island since 2018. It is a collaboration between the Bank, the Terengganu state government and financial industry players. To encourage greater adoption of e-payments among residents and local businesses, a three-pronged approach was adopted to ensure sustainable and inclusive digital adoption across the island:

a) ensuring the infrastructure is in place to facilitate customer on-boarding;
b) enhancing digital and financial literacy to foster the safe and effective use of e-payment in order to optimise its benefits; and
c) encouraging wider adoption and confidence in e-payments by leveraging on local community leaders and various stakeholders.

Diagram 1: Three-pronged Approach Adopted to Promote e-Payment in Pulau Redang

Infrastructure readiness

- Payment players namely PayNet, Maybank and Hong Leong Bank worked with the Bank to provide support and incentives including monetary benefits during on-boarding and low e-payment acceptance costs for local businesses. Around 50 card terminals and QR codes were also deployed to enable card and subsequently, DuitNow QR payments on the island.
- Prior to the programme, authorities erected network towers in Pulau Redang, thus supporting more stable internet connectivity throughout the island. This enabled the smooth roll-out and use of e-payments.

Digital & financial literacy

- Multiple engagement sessions were conducted to familiarise the local community with the e-payment infrastructure and to educate them on using e-payment in a safe and secure manner.

Support from community leaders

- Community leaders, officers from local authorities and representatives from the member of parliament's office actively engaged local communities to familiarise and encourage them on the safe use and benefits of e-payment.
- Activities to get closer to the local community such as the cleaning of suraus and community halls as well as the donation of goods amid the COVID-19 pandemic also helped gain further support from the locals in Pulau Redang on the programme.

Source: Bank Negara Malaysia

The outcomes of these efforts in Pulau Redang are clearly visible today. 73% of small merchants and businesses across the island have adopted e-payment while most of the other communities are in the midst of migrating as well. Of note, about RM65,000 worth of debit card transactions are made via merchants on this island each month, more than double the amount recorded when the initiative was first introduced.

Cikgu Har no longer worries about access to cash as she is now able to use e-payment to pay for purchases. More importantly, she is also relieved that she does not have to share her personal banking information with anyone. Now, she always has direct access to money in her account for use.

Meanwhile for Kak Zura, the shift to e-payment not only provides convenience, it also protects her from potential financial losses caused by spoiled or misplaced notes. Kak Zura no longer needs to pay her supplier in cash at the jetty. She can now pay from the comfort of her home. She is also able to keep a proper record of her sales transactions through her bank statement. The records will also help Kak Zura obtain financing from financial institutions to grow her business.

The adoption of e-payment in Pulau Redang for safer and more efficient transactions provides a useful blueprint for others to follow. Similar initiatives and collaboration have been pursued to digitalise payments in other places across Malaysia such as Pasar Besar Siti Khadijah in Kota Bharu and the wet markets in Pulau Pinang. As this trend continues throughout Malaysia, more will benefit from increased efficiency, convenience and security.

Diagram 2: Video 'Redang: Sebuah Pulau Inklusif' Documents the Success of this Outreach Programme[1]

Source: Bank Negara Malaysia

[1] The video can be viewed via the link here: https://www.youtube.com/watch?v=tGiOArZL_Cs.

e-Duit Campaign

The success of the structured approach taken in Redang inspired the launch of a nation-wide e-payment campaign, **e-Duit!: *Selamat, Senang, Segera*** by the Bank and financial industry in October 2022. This campaign aims to coordinate e-payment initiatives by public and private sectors nationwide. This is with the view to sustain the positive e-payment growth trends already observed towards achieving the target of more than 15% CAGR of e-payment transactions set in the Financial Sector Blueprint 2022-2026 (Blueprint).

Diagram 3: e-Duit Logo

Source: Bank Negara Malaysia

A key focus of the e-Duit campaign will be to encourage good cybersecurity precautionary measures. Education on cyber-security measures is important and will remain a permanent, central feature in the campaign, as the strongest defence against financial fraud. A recent Bank survey[2] revealed that four out of ten respondents would be willing to share their bank account passwords with family and close friends. Additionally, almost two thirds of respondents do not pay attention to the security features of bank websites when performing online banking transactions. Under the e-Duit campaign, we will double down on efforts to teach and raise awareness among consumers on behaviours that can protect them against fraud, such as never sharing passwords or downloading malware-compromised apps from unofficial application stores. Further details on the safe usage of digital financial services can be found in the Annual Report 2022 feature article *“Let’s Go Digital Confidently”*[3].

Diagram 4: Benefits of e-Payment

Secure

- Reduce potential losses due to robbery or theft from physical cash handling / transfers
- Security feature of e-payment instruments that can be customised to one’s risk appetite or use patterns provides added security
- High security standards imposed on e-payment operators and monitored closely by the Bank

Simple

- Payments can be made with a simple wave, tap or scan
- Automatic deduction / reload facilities available for better customer convenience
- Payment is recorded for easy future reference

Swift

- Quick payment service at any time and from anywhere across the globe
- No need to queue to make payment

Source: Bank Negara Malaysia

[2] The Financial Capability and Inclusion Demand Side Survey 2021 (https://www.bnm.gov.my/documents/20124/8440087/fsr22h1_en_box1.pdf)
[3] Feature Article “Let’s Go Digital Confidently”

Throughout the multi-year campaign which will run until 2026, coordinated industry efforts will be ramped up to on-board new businesses, and curated education initiatives such as e-DuitDesa and e-DuitKampus will be carried out across the country to improve digital and financial literacy among financial consumers. An e-DuitDay, a designated day of the week on which the public will be encouraged to make all payments using digital means, is also being explored. During the e-DuitDay, businesses will be enlisted to encourage customers to use e-payment methods through awareness and promotional activities as well as benefit programmes tied to the use of e-payments.

Futureproofing Key Payment Infrastructures

The financial industry remains on track to migrate fully to the new ISO 20022 messaging standard[16] for both domestic and cross-border payments (Diagram 7). ISO 20022 adoption will enhance payment efficiency, strengthen risk management and offer better value-added solutions to customers. Since June 2022, RENTAS has been equipped with a centralised translator to facilitate message conversion between the existing ISO 15022 standard and the new ISO 20022 standard. Individual RENTAS participants are on track to implement ISO 20022 for domestic transactions. Around 30% of participants have already completed their migration ahead of the domestic July 2024 deadline for full adoption of ISO 20022 by RENTAS participants, which means they can already receive incoming and send outgoing ISO 20022 messages via RENTAS. For cross-border payments, SWIFT has announced that the commencement of ISO 20022 has been delayed to March 2023.[17] The Bank has set an earlier domestic June 2025 deadline for cross-border payments to minimise any risk of delays in meeting the global timeline (November 2025) for full migration. This in turn will reduce risks of disruptions to cross-border payment transactions.

Diagram 7: Progress on ISO 20022 Migration

Jun 2022 — COMPLETED

Phase 1
Co-existence approach for RENTAS

- RENTAS able to support dual messaging standards, i.e. **existing ISO 15022** and **new ISO 20022**
- **Centralised translator** at RENTAS facilitates conversion from messages under ISO 15022 format to ISO 20022 and vice versa

Mar 2023

Delayed[1] commencement of migration for cross-border payments

Managing data truncation risk

- *As the existing ISO 15022 format is unable to accommodate additional data from ISO 20022, participants still using ISO 15022 will need to manage such **risk when passing on cross-border transactions received in ISO 20022 format via RENTAS***
- *Failure to pass on full information **may result in non-compliance with FATF recommendation**[2]*
  - ✓ *17 intermediary[3] FIs are ready to pass on full information by Mar 2023*

Jul 2024

Phase 2
Full adoption by RENTAS participants

- **Alignment to global market practices** for large value payment systems, i.e. HVPS+[4], to facilitate harmonisation of payment messages internationally
- **New data fields** will be introduced in RENTAS (e.g. purpose codes, structured address) to reap full potential of ISO 20022

Jun 2025 — **BNM deadline**

Nov 2025 — **SWIFT deadline**

Deadline for full migration to ISO 20022 for cross-border payments

Progress by RENTAS participants in 2022

19 out of 65 participants

have successfully migrated, while the remaining are progressing before the 2024 deadline

29%

● Domestic payment
● Cross-border payment

1 From November 2022 to March 2023
2 Potential non-compliance with Financial Action Taskforce (FATF) Recommendation 16, where it requires FIs to include required and accurate sender and beneficiary information, and ensure that all information remain available throughout the payment chain to create an AML/CFT audit trail
3 Refers to local FI that receives a cross-border payment from a foreign FI and subsequently passes it on to another local FI to be credited into beneficiary's account via RENTAS
4 A global market practice for ISO 20022 messaging standards to harmonise usage of ISO 20022 for large value payment systems

Source: Bank Negara Malaysia

16 ISO 20022 is a new internationally recognised messaging standard for the financial industry with enhanced data capabilities, structured messaging format and flexibility to adapt to new technologies.

17 In October 2022, SWIFT announced that it had agreed to delay the commencement of its ISO 20022 migration for cross-border payments from November 2022 to March 2023, following a request by the SWIFT user community.

The Bank also advanced plans to modernise RENTAS as part of a multi-year project envisaged under the Blueprint. Key initiatives will be pursued to further:

- strengthen resilience;
- promote interoperability and efficiency;
- facilitate competition and innovation; and
- enhance user functionalities.

Industry engagements also surfaced pain points in current processes[18], as well as suggestions for system and service enhancements. This will guide the development of the RENTAS modernisation roadmap. Financial institutions were generally supportive of proposals for a holistic review of the existing system infrastructure, enhancements to data analytics and reporting capabilities, as well as strengthened intraday liquidity management.

These proposals along with feedback from ongoing industry engagements will also inform our work under Phase 2 of central bank digital currency (CBDC) exploration[19] project to study the potential of CBDC and distributed ledger technology (DLT)[20] to futureproof RENTAS. Our aim is to ascertain how these technologies could potentially alleviate the issues raised by the industry such as reducing manual compliance processes, streamlining the trade confirmation process using DLT and smart contracts, as well as explore new use cases such as asset tokenisation.

Facilitating responsible innovation while managing emerging risks

To manage potential risks emerging from digital assets in Malaysia, the Bank – through the Digital Currency Research Hub – directed its focus on the following key areas throughout 2022:

- assess the potential risks of digital assets to the Bank's mandates;
- scale up internal capacity and understanding on digital assets;
- strengthen surveillance capabilities; and
- elevate public awareness.

Our assessments revealed that spillovers from the digital asset market to the financial system so far remain well-contained given limited interlinkages.[21] We stepped up engagements with key stakeholders such as digital asset players and financial institutions to obtain more granular market insights and data. These engagements also allowed us to better understand future plans of our banks in the digital asset space. The Bank continued our collaboration with the Securities Commission to identify and address any potential risks to financial stability arising from developments surrounding global and domestic digital asset market activities. We also held knowledge-sharing sessions, mainly targeted at youths, to raise awareness on digital assets and emerging payment innovations such as CBDC.

Speaker series with Perdana Fellow Alumni Association

Podcast session on the use of digital assets in collaboration with the Association of Malaysian Economics Undergraduates (AMEU)

[18] These include the level of manual intervention required in regulatory compliance checking and pre-settlement confirmation for securities trades.

[19] This is part of the multi-year CBDC exploration starting from Project Dunbar, led by BIS Innovation Hub Singapore alongside several central bank partners, which seeks to test the use of wholesale CBDC via a shared multi-CBDC platform.

[20] DLT is a means of saving information through a distributed ledger, i.e. a repeated digital copy of data available at multiple locations (FSB (2022, p.25)).

[21] Refer to BNM Financial Stability Review: First Half 2022 Box Article titled 'The State of Play of Digital Assets in Malaysia and Linkages to Financial Stability'.

Faster, cheaper and more convenient cross-border payments

In 2022, the Bank intensified efforts to bring about faster, cheaper and more convenient cross-border payment services. These initiatives are aligned with global targets set under the Group of 20 (G20) Roadmap for Enhancing Cross-border Payments.[22] Notable progress has been made to link Malaysia's instant payment system (IPS) with other IPS. To date, we have enabled payment linkages with Indonesia, Singapore and Thailand – countries where Malaysia has strong economic ties in terms of trade, tourism and remittances. Efforts are also underway to establish payment linkages with the Philippines. With these payment linkages, consumers will be able to conduct cross-border QR payments and person-to-person (P2P) fund transfers at lower cost, higher speed and with greater transparency. These efforts support ASEAN's shared aspiration for a more interconnected payment systems, and greater financial and economic integration.

[22] The G20 Roadmap is part of the initiative by the Financial Stability Board (FSB) to identify areas where further work is needed to improve cross-border payment systems and remove unnecessary barriers.

Cross-Border Payment Linkages – Project Nexus and the Push for a Multilateral Approach

Making cross-border retail payments and fund transfers faster, cheaper and more transparent

Making payments or sending money domestically within Malaysia has never been easier. Since the roll-out of our IPS in December 2018, users can make domestic retail payments just by scanning a QR code at merchants using DuitNow QR, or send money instantly via DuitNow Transfer simply by keying-in his or her mobile number. However, making payments overseas and sending money to another country remains a hassle. The fees and exchange rate could be high, not transparent, and at times, the recipient may only receive the money after a few days.

To mimic the benefits of faster, cheaper and more seamless payments that we currently enjoy domestically in the cross-border payment space, the Bank has been working on linking our IPS with other IPSs in several neighbouring countries. To date, we have established bilateral cross-border payment linkages for QR payments with Thailand, Indonesia and Singapore. This means that Malaysians travelling to these countries can make instant retail payments just by scanning QR codes displayed at participating merchants in these countries[1], and vice versa. Complementary work is also underway to enable P2P transfers between these countries (Diagram 1). This would enable a sender to transfer funds to a recipient in the other countries instantly simply by using his or her mobile or national identification numbers. These efforts have collectively contributed towards increased payment connectivity in ASEAN with nine live linkages[2] already operational.

Diagram 1: Status of Bilateral Linkages with Malaysia

Partner countries	Cross border QR payments	Cross border P2P fund transfers
Thailand	Live	Under development
Indonesia	Live	Under discussion
Singapore	Live[3]	Under development
Philippines	Under development	Under discussion

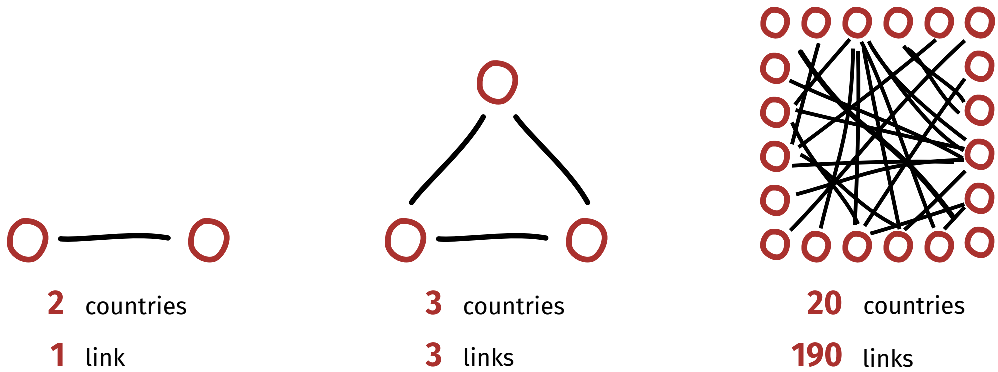
Source: Bank Negara Malaysia

[1] Further details on the bilateral payment linkages can be found in the Annual Report 2021 spotlight article on 'Real-Time Payment System Linkages for Efficient Cross-Border Payments'.
[2] Seven cross-border QR payments: Cambodia-Thailand, Indonesia-Malaysia, Indonesia-Thailand, Malaysia-Thailand, Malaysia-Singapore, Thailand-Singapore, Thailand-Vietnam.
Two P2P fund transfers: Cambodia-Malaysia, Singapore-Thailand.
[3] To go live on 31 March 2023.

A multilateral approach can address challenges in connecting IPS bilaterally

Given the region's experience in building these linkages and their clear benefits, there has been growing interest from other countries to establish new bilateral payment linkages with ASEAN countries. However, a bilateral linkage with many different countries is highly inefficient (Diagram 2) for several reasons. Firstly, it can take significant time and resources to tailor each bilateral linkage to suit local infrastructure and requirements. Replicating the infrastructure across multiple countries can also be costly. Secondly, each bilateral linkage involves negotiations among many parties including the central banks, IPS operators, banks and other payment service providers to address operational matters such as user experience and payment settlement between banks in both countries. Dedicated resources are also needed to develop and test newly built systems.

Diagram 2: Scaling Up Bilateral Payment Linkages is Challenging due to the Amount of Effort and Resources Needed to Develop Each Linkage



Source: Bank for International Settlements (BIS)

Recognising the challenge in scaling up bilateral payment linkages, the Bank for International Settlements Innovation Hub (BISIH) in Singapore has developed a blueprint[4] for multilateral cross-border payment connectivity. Known as Project Nexus, the Bank, BISIH, PayNet as well as central banks and IPS operators in Singapore and Italy undertook a one-year experiment to test if such a connectivity model is feasible. The experiment, which was completed in December 2022, demonstrated that a multilateral model for connecting IPSs is technically feasible. This successful Nexus solution included a test model (or Nexus gateway) and draft participant rules (or Nexus scheme). The gateway acts as a central platform for IPSs to connect to and manage instant cross-border payments and fund transfers and payment-related processes such as payment messaging, currency conversion, and compliance screening. The scheme outlines the roles and responsibilities of all participants in the Nexus solution. These include the IPS operators and payment services providers. It also outlines key operational processes of the Nexus model. During the experiment, cross-border payments were successfully credited into a beneficiary's account within 60 seconds.

Despite the experiment showing that the Nexus solution is technically feasible, there are other factors that still need to be considered before it can be implemented in the real-world. One example is the governance arrangement for the entity that will eventually manage and operate the Nexus solution. This would require, among others, identifying the right structure, composition and voting mechanism for its board of directors that would appropriately represent the interests of various parties, while ensuring that decisions are made efficiently. Other factors include developing a viable business model for participating banks and other payment services providers, and establishing an appropriate supervisory oversight arrangement to ensure the solution remains safe and resilient.

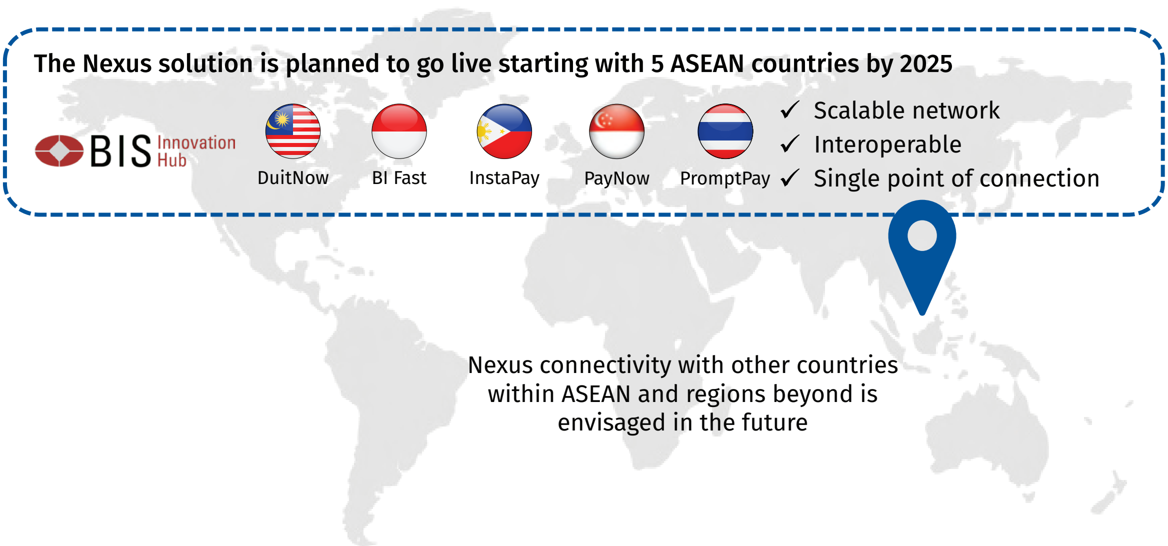
(Detailed findings can be found in the Project Nexus report[5])

[4] https://www.bis.org/about/bisih/topics/fmis/nexus.htm.
[5] https://www.bis.org/publ/othp62.pdf.

Bringing Nexus to the real world, with ASEAN as the 'first-mover'

Given the experience with bilateral payment linkages in the region, a push for multilateral payment connectivity is a natural next step for ASEAN. To realise this vision, the Bank has signed a Memorandum of Understanding (MoU) on Regional Payment Connectivity with the central banks of Indonesia, Philippines, Singapore and Thailand during the G20 Summit in Bali in November 2022. The five countries will participate in the next phase of Project Nexus which aims to translate the current Nexus solution into an operationally and commercially viable model by 2025. This project has tremendous potential for the region. Consumers would be able to enjoy cheaper, faster and more transparent payment and fund transfers among the participating countries in the future. It can also strengthen intra-regional trade and economic cooperation, and spur greater innovation in the payments space. Ultimately, it is envisaged to set the global benchmark for next-generation payment infrastructure that can be used by all, for cheaper and more transparent cross-border payments (Diagram 3).

Diagram 3: Multilateral Payments Connectivity between 5 ASEAN Countries and Beyond



Source: Bank Negara Malaysia

MoU on Regional Payment Connectivity was signed by the Governors of the five central banks (from left: Bank of Thailand, Monetary Authority of Singapore, Bank Indonesia, Bank Negara Malaysia, and Bangko Sentral ng Pilipinas)

Source: Bank Indonesia

Going Forward

In 2023, the Bank will continue to work on ensuring that key payment and remittance services remain safe, efficient, and reliable. This will be guided by the objectives embedded within the Blueprint.

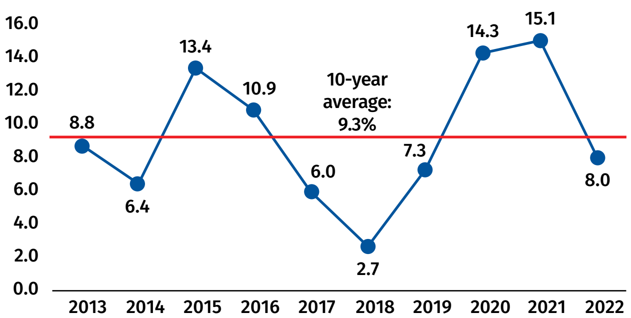
The Bank is committed to futureproofing the country's payment infrastructure to meet the evolving needs of the financial system and broader economy. We will closely monitor market developments and undertake policy or supervisory interventions as appropriate to mitigate emerging risks. We will also continue to strengthen our collaboration with public and private sector stakeholders. This is important to elevate public awareness on the benefits and risks of emerging payments, as well as to promote responsible innovation.

Issuing Currency

Currency in Circulation

Malaysia's currency in circulation (CIC) grew by 8.0% to RM162.1 billion in 2022 (2021: RM150.1 billion), compared to a record high of 15.1% in 2021 (Chart 1). This can be attributed to the public holding less cash for precautionary reasons as we transitioned out from the COVID-19 pandemic. Continued acceleration of digital payments[1] also contributed to the lower CIC growth, similar to the trend observed in many other countries.

Chart 1: CIC Annual Growth Rate (%)



Source: Bank Negara Malaysia

Currency Operations

The Bank is responsible for the entire currency-issuing value chain, including planning, issuance, circulation and withdrawal of currency notes and coins.

One of our responsibilities is to maintain high quality of notes in circulation. This requires the Bank to regularly process and remove from circulation unfit notes that fall below our prescribed standards. The Bank also works closely with financial institutions (FIs) and registered currency processors (RCPs)[2] on the processing of currency.

FIs and RCPs handle and process large volumes of notes on a daily basis and, thus, play an important role in ensuring that notes are processed, authenticated and sorted according to the quality standards set by the Bank. Among others, the Bank requires our notes not to be defaced with any word or symbol as well as not damaged.

Banknotes that pass this process are deemed fit and will be reissued into circulation (Diagram 1). Recirculating fit notes is both cost-effective and environmentally sustainable, given that note printing is water- and energy-intensive. In contrast, notes that do not meet quality standards are classified as unfit and will be shredded[3].

As the sole issuer of currency, the Bank has a duty to ensure sufficient supply of notes and coins to meet public demand at all times, including during festive seasons when demand for cash is normally higher. The Bank ensures currency availability by keeping its stock at appropriate levels through timely delivery of new notes from the banknote printers as well as fit notes generated from currency processing.

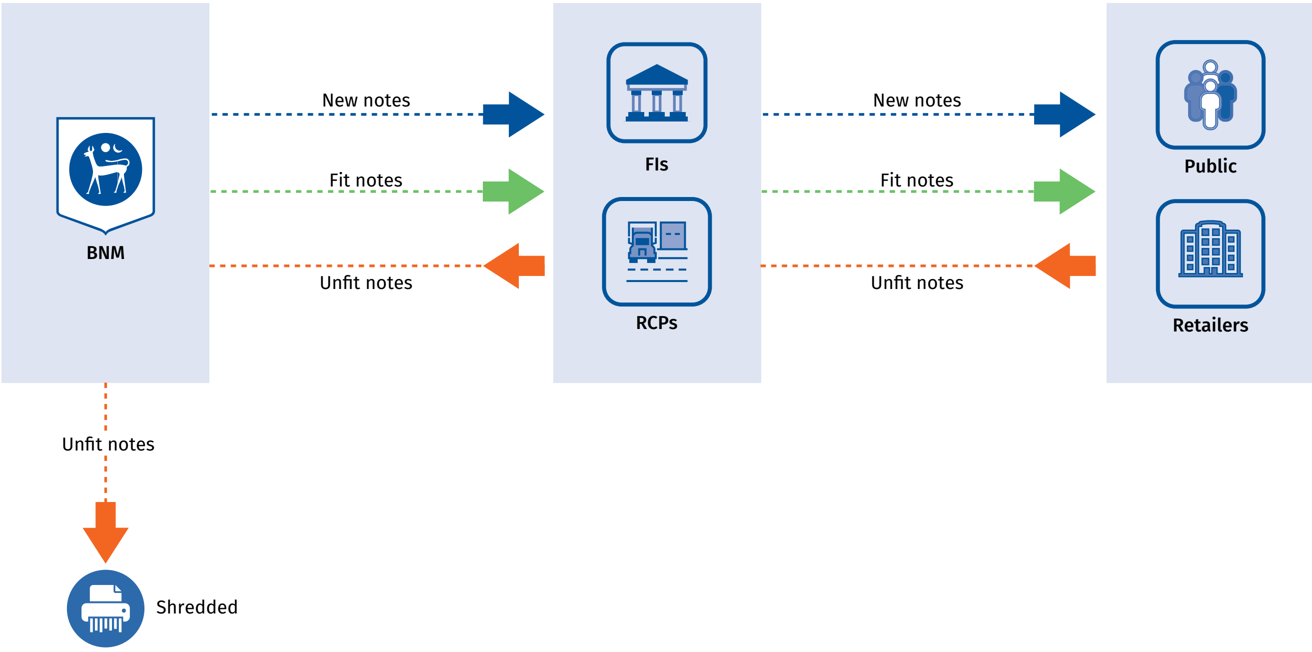
In our daily currency operations, the Bank processes millions of notes each day using high-speed processing machines at our Automated Cash Centre (ACC) and five regional offices (BNMOs) in Pulau Pinang, Johor Bahru, Kuala Terengganu, Kuching and Kota Kinabalu. In 2022, we processed a total of 2.41 billion (2021: 1.84 billion) pieces of notes nationwide.

The Bank is also responsible for maintaining the integrity of Malaysian currency. This means minimising the risk of counterfeiting incidents to ensure high public confidence in our notes and

[1] See Chapter 1.5 on Promoting Safe and Efficient Payments and Remittance Services.
[2] Companies that are registered with the Bank under the Currency Act 2020 to carry out currency processing business, defined as the business of collecting, sorting as well as packing currency by quality, quantity and denomination.

[3] To reduce the environmental impact of the Bank's currency operations, we will be adopting waste-to-energy process to convert the shredded notes into other usable forms of energy.

Diagram 1: Banknote Recirculation Model in Malaysia



Note: FIs – Financial Institutions
RCPs – Registered Currency Processors

Source: Bank Negara Malaysia

coins. In this respect, Malaysia's counterfeiting index is insignificant at 0.3 parts per million (ppm)[4] as of end-December 2022, well below the international counterfeiting benchmark index of 15 ppm. Our notes are embedded with numerous security features. Counterfeits detected are mostly poor imitations of genuine notes without any security features. An effective defence against counterfeit currency is widespread awareness of our security features (see the accompanying article entitled Banknote Counterfeiting in Malaysia: Trends, Challenges and Strategies).

For the procurement of notes, the Bank implements a competitive and open-tender process involving a range of reputable and eligible international banknote printers to keep operational costs down. Likewise, we also procure coin blanks through open tender for minting at our own facility, Kilang Wang.

In 2022, we issued four commemorative coins to mark special occasions that have national significance (Diagram 2). Featuring a different aesthetic element, the first square-shaped commemorative coin was introduced in conjunction with the 100th anniversary of Universiti Pendidikan Sultan Idris. We have an online platform for the public to order and pay for commemorative coins, with the purchased commemorative coins delivered directly to buyers' homes.

To promote a greater appreciation of numismatics among the public, ringgit notes with special serial numbers with repetitive prefixes and numbers, such as LL0000001-0000010 and LL8888888, are regularly auctioned. In 2022, the Bank, via an appointed auctioneer, conducted two online auctions that attracted strong interest from collectors and bidders from around the world.

[4] In other words, only three pieces are counterfeit for every ten million pieces of notes in circulation.

Diagram 2: Commemorative Coins Issued in 2022

100th Anniversary of the Cooperative Movement in Malaysia

100th Anniversary of Universiti Pendidikan Sultan Idris

50th Anniversary of Kuala Lumpur as a City

50th Anniversary of Jabatan Sukarelawan Malaysia

Source: Bank Negara Malaysia

Currency Act

The Currency Act 2020 (CA2020) provides a comprehensive regulatory and operational framework for the management of currency operations, including the powers of the Bank to regulate and supervise currency processing businesses. This oversight is critical in the overall management of currency operations, given that most FIs outsource their currency operations to RCPs.

In line with the provisions of CA2020, the Bank on 1 April 2022 completed the registration of four cash-in-transit (CIT) companies as RCPs under the Act. Accordingly, all four companies have now come under the regulation and supervision of the Bank for currency processing business.

In 2022, we issued two guidelines[5] for the members of the public to improve handling of currency.

The first is the revised Guidelines on Reproduction of Malaysian Currency Image issued on 1 April 2022. This document outlines the circumstances under which the reproduction of the images of Malaysian currency notes or coins are allowed and the conditions to be observed to maintain the dignity and integrity of our currency. Among others, the Guidelines require that the reproduced images:

- must maintain the original design, differ in size from the actual currency note, refrain from distorting the Ruler's image or any of the designs; and
- must not be deemed inappropriate, offensive, compromise the currency's dignity and integrity, or appear on commonly discarded products (e.g. tissues and face masks).

The second is the revised Guidelines on Quality of Currency and Handling of Suspected Counterfeit Currency issued on 22 December 2022. This document provides the latest guidance on the following:

- how to assess the quality and integrity of CIC, including proper handling of currency, how to differentiate between fit and unfit notes, and procedures involved to exchange unfit currency with FIs for fit ones; and
- how to detect counterfeit currency, as well as procedures for handling such currency. Step-by-step guidance is provided on how to handle suspected counterfeit currency using the simple Feel-Look-Tilt-Check (FLTC) authentication method to detect counterfeit currency.

5 Accessible from the Bank's website at https://www.bnm.gov.my/guidelines-related-to-currency-management-and-operations.

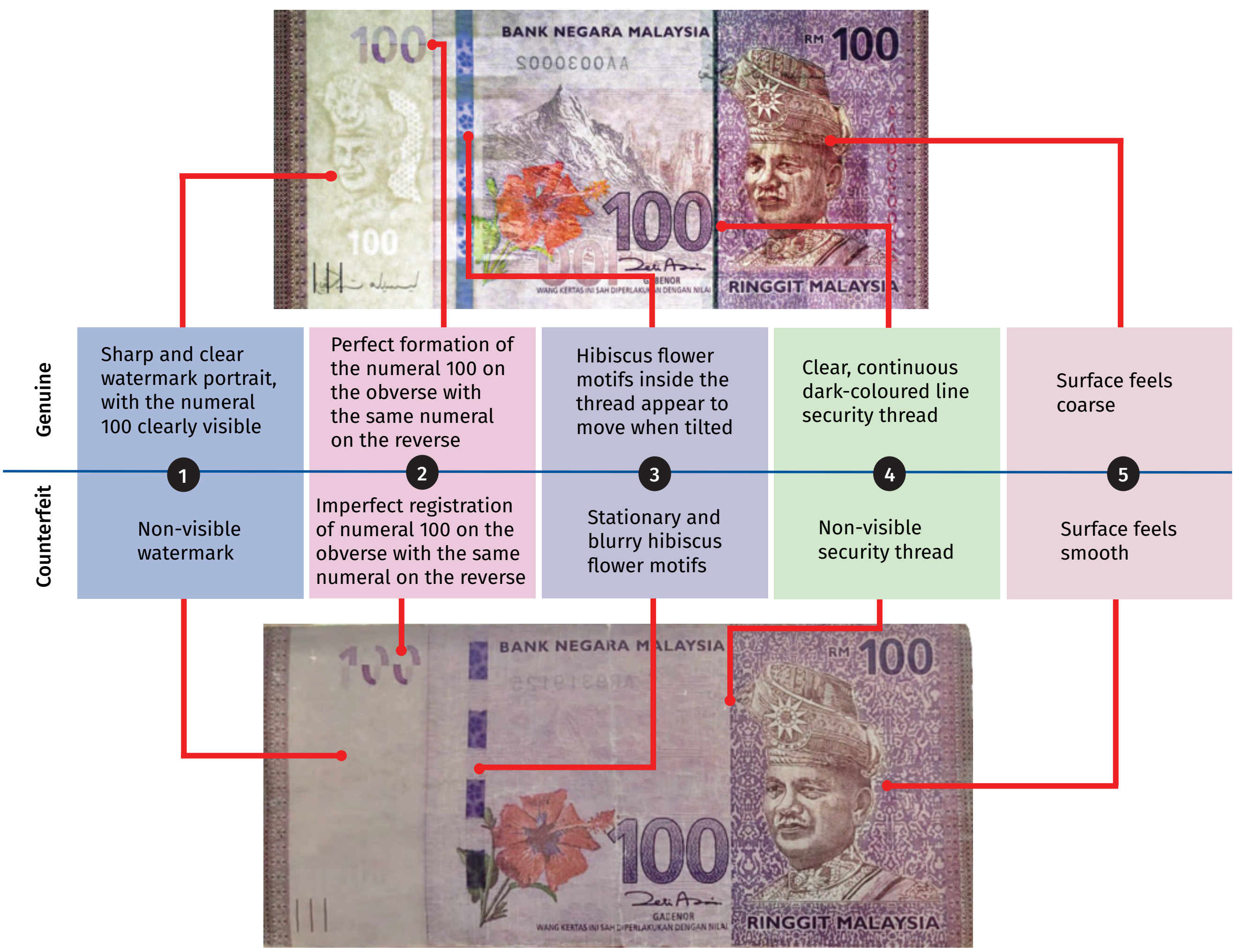
In 2023, the Bank will continue its work on strengthening the regulatory framework for currency management operations by issuing two new policy documents. These policy documents will impose the necessary requirements on FIs and RCPs to observe the quality and integrity of currency, and manage their business, affairs and activities prudently, professionally and with integrity.

Banknote Counterfeiting in Malaysia: Trends, Challenges and Strategies

As the sole currency issuing authority, only the Bank has the power to issue legal tender currency notes and coins in Malaysia. Legal tender means that the currency notes and coins issued by the Bank are legally recognised as valid means of payment. Counterfeit currencies, on the other hand, are imitations of genuine notes and coins that are produced by criminals with the intention to deceive the public for financial gain. Counterfeit currency is not legal tender and has no value. As such, the Bank does not reimburse any counterfeit Malaysian currency.

In Malaysia, counterfeiters usually target high denomination notes due to their high value. At first glance, counterfeit notes may appear similar to genuine notes. Upon closer inspection, however, there are clear differences that the public should be aware of. Genuine notes have many embedded security features that are harder to replicate. Thus, the best way to differentiate a genuine note from a counterfeit is to identify common security features such as the watermark, perfect see-through register, security thread and intaglio print (that gives a coarse feel on the surface of the notes) (Diagram 1).

Diagram 1: Identifying Genuine and Fake Banknote



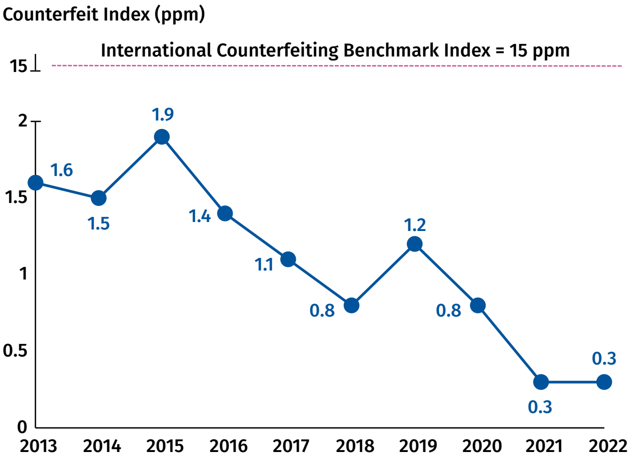
Source: Bank Negara Malaysia

Five Key Facts About Note Counterfeiting in Malaysia

Incidence of note counterfeiting in Malaysia is well below the international counterfeiting benchmark index of 15 parts per million (ppm).

Key Fact 1: Malaysia's note counterfeiting index has been trending downwards

Chart 1: Counterfeit Index (ppm) Over 10 Years

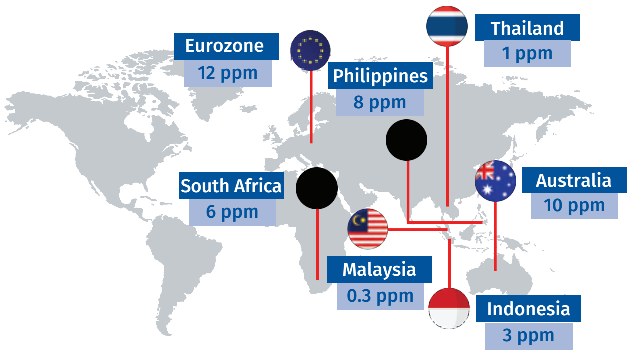


Source: Bank Negara Malaysia

In the last ten years, our note counterfeiting index has steadily declined from a peak of 1.9 ppm in 2015 to 0.3 ppm in 2022 (Chart 1), equivalent to only three pieces of counterfeits for every ten million pieces of currency notes in circulation. Reported cases of counterfeit notes are very rare.

Key Fact 2: Malaysia's note counterfeiting index is lower than that of other benchmarked countries

Diagram 2: Counterfeit Index Against Other Countries



Note: Data for 2021 (rounded up), except Malaysia

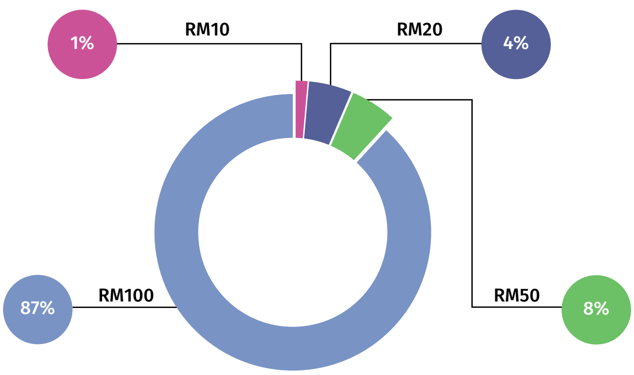
Source: Websites and Annual Reports of the Respective Central Banks

Malaysia's low note counterfeiting index underlines the robustness of the anti-counterfeiting security features embedded into our notes.

Despite low note counterfeiting incidence, the Bank remains vigilant in curbing currency counterfeiting activities.

Key Fact 3: High denomination notes are more likely to be targeted

Chart 2: Counterfeit Percentage Based on Denominations



Note: Data from Jan'22 – Dec'22

Source: Bank Negara Malaysia

Key Fact 4: Central region recorded higher incidence of currency counterfeiting

Diagram 3: Counterfeit Cases Reported According to Region

Note: Data from Jan'22 – Dec'22

Source: Bank Negara Malaysia

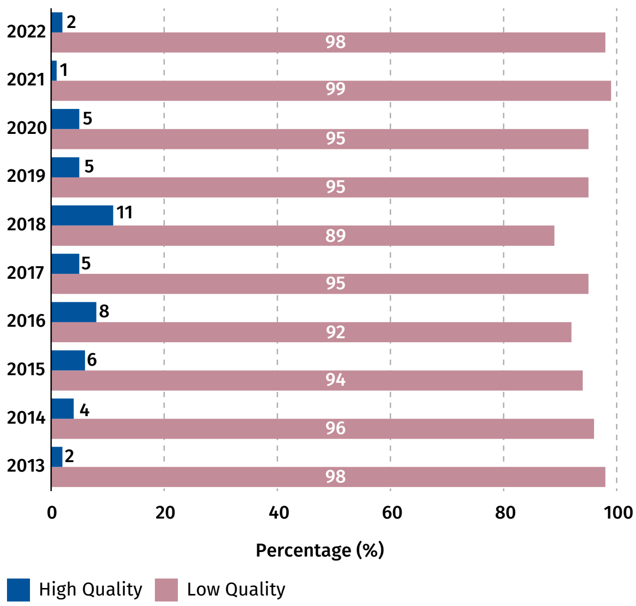
The two highest denominations, namely RM100 and RM50, are the most targeted denominations (Chart 2), accounting for 95% of all counterfeiting incidents reported to the Bank, due to their higher value.

The Central region, which has the highest concentration of population and CIC, recorded higher incidence with 69.3% of counterfeit cases reported in 2022 (Diagram 3). Reports of note counterfeiting in other regions are significantly fewer and isolated.

Counterfeit banknotes in Malaysia are mostly of low quality that can be easily identified.

Key Fact 5: Most counterfeit notes are of low quality

Chart 3: Percentage of Counterfeit Cases Based on Quality



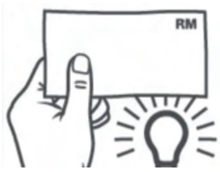
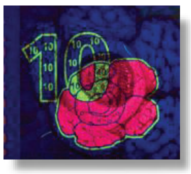
Source: Bank Negara Malaysia

Most counterfeit notes reported to the Bank are simple counterfeits, printed using colour printers on ordinary paper and without any security features embedded. With a smooth surface and no coarse feel, they are mostly of low quality, making the counterfeits easily distinguishable from genuine notes.

Counterfeit incidents in Malaysia are mostly perpetrated by small-scale operations, usually by petty criminals who work alone using commercial devices such as photocopiers, scanners and laser printers. As such, the counterfeits that they produce typically lack all embedded security features.

Our notes have numerous security features on both sides. These are a mix of both simple and sophisticated features. Simple features can be detected using the human senses of sight and touch. The public can make use of the Feel-Look-Tilt-Check (FLTC) authentication method (Diagram 4) to check the security features of our notes. The more sophisticated security features such as magnetic inks can be detected by sensors that are fitted on all cash deposit machines (CDM) as well as on high-speed processing machines used by the Bank, FIs and RCPs to process notes. Hence, it is highly unlikely that any counterfeit notes would pass undetected through any of these CDM and processing machines.

Diagram 4: FLTC Authentication Method for Detecting Counterfeit Banknotes

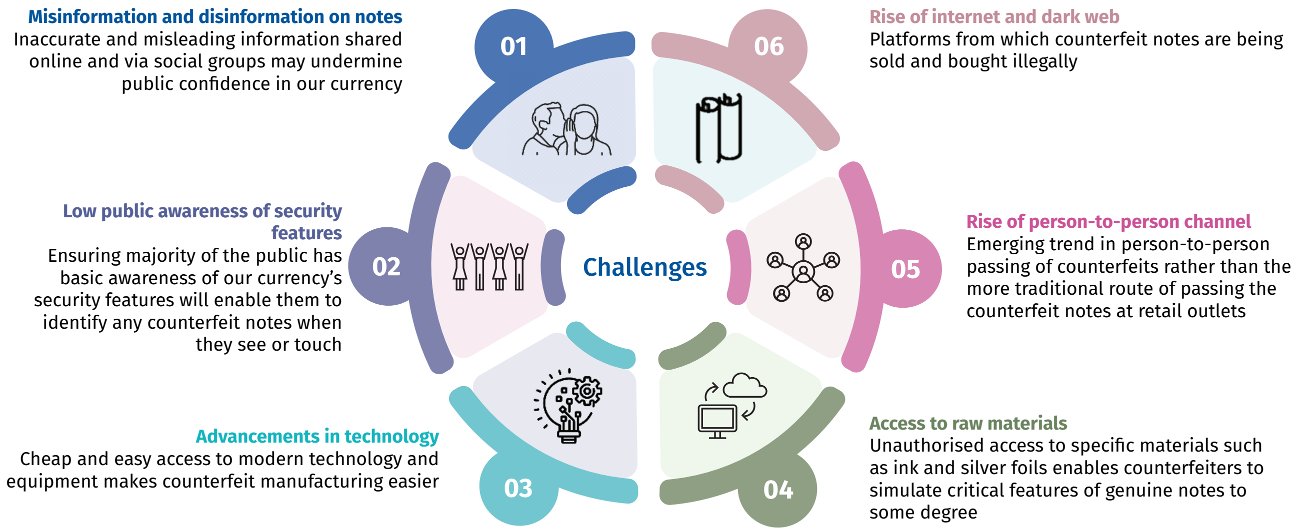
Method	Details	Security Features	
FEEL 	• Currency note is printed on a very high-quality paper/polymer material (substrate). • Raised printing effect produced by applying layers of tactile inks on various parts of the obverse and reverse sides of the note.	Feel the raised print effect on the portrait of the first SPB Yang di-Pertuan Agong 	
LOOK 	Look at the currency note against white light and observe: • 3-Dimensional watermark portrait, perfect see-through register and clear window will appear.	Watermark portrait  Clear window 	Perfect see-through 
TILT 	Tilt the note and observe: • Image and colour change at the security thread and coloured glossy patch.	Colour-shifting security thread 	Coloured-glossy patch 
CHECK 	Check the currency note using simple equipment: • UV light device – paper material (substrate) will not glow except for selected security features. • Magnifying glass – micro-letterings will be clearly visible.	Fluorescent elements 	Micro letterings 

Source: Bank Negara Malaysia

Six Challenges in Managing Currency Counterfeiting Threats in Malaysia

Despite low incidence of currency counterfeiting, managing currency counterfeiting threats remains a challenge (Diagram 5). Enhancing our notes with more security features will not completely eliminate counterfeit notes in circulation as counterfeiters will continue to develop and adopt newer techniques to defraud the public and evade the authorities.

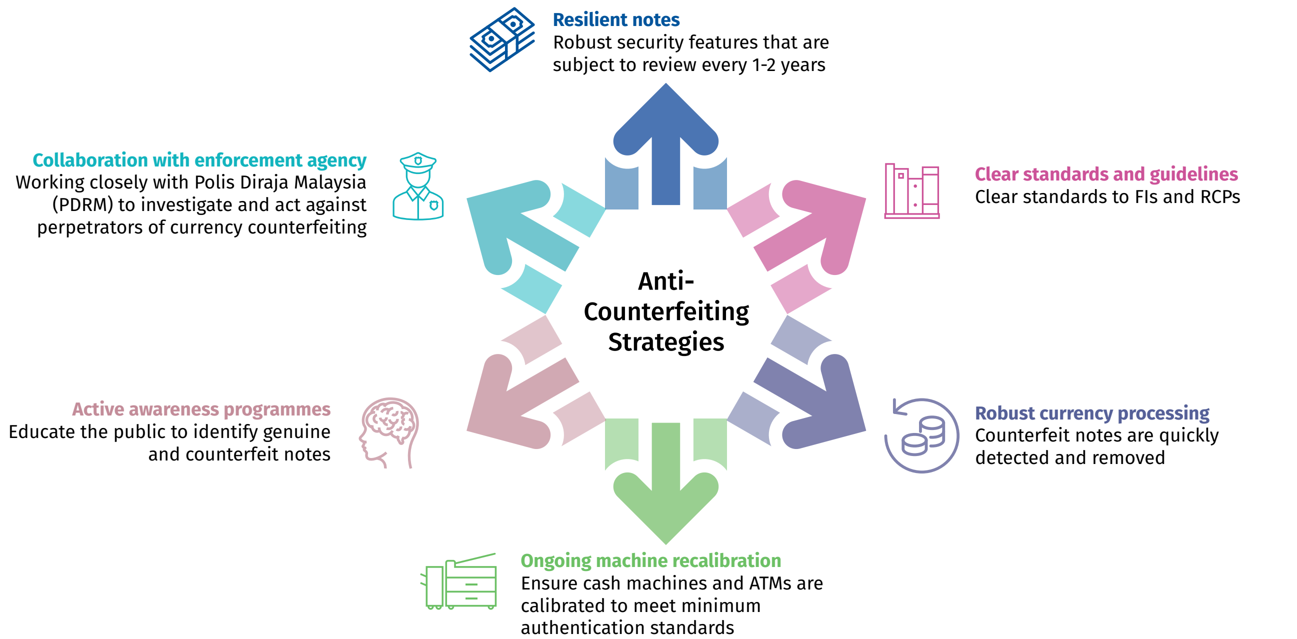
Diagram 5: Challenges in Managing Counterfeiting Threats



Source: Bank Negara Malaysia

The Bank plays an active role to protect the integrity of our currency and ensure high public confidence in the country's notes and coins. Six anti-counterfeiting strategies are deployed to ensure our currency notes and coins remain protected against counterfeiting (Diagram 6).

Diagram 6: Anti-Counterfeiting Strategies



Source: Bank Negara Malaysia

Issuing notes with robust security features into circulation is one of the Bank's multi-pronged anti-counterfeiting strategies. We also develop standards for our industry players and guidelines for the public to ensure any counterfeit notes are detected and removed so that only high-quality notes are reissued into circulation. In combating counterfeiting activities, the Bank works closely with cash machines and Automated Teller Machines (ATMs) operators to calibrate their machines to meet our authentication standards. The Bank also collaborates with external stakeholders to conduct currency awareness programmes to enable them to spot counterfeit notes when they see or touch one. In ensuring the effectiveness of the strategies, the Bank works closely with PDRM to investigate and act against perpetrators of currency counterfeiting.

Maintaining Financial Integrity

The Bank is committed to upholding the integrity of Malaysia's financial system by ensuring compliance to AML/CFT standards to detect and prevent abuse by criminals.

The Bank's Role

As the competent authority under the Anti-Money Laundering, Anti-Terrorism Financing and Proceeds of Unlawful Activities Act 2001 (AMLA 2001), the Bank in collaboration with various stakeholders plays a key role in ensuring a holistic and robust national anti-money laundering and countering financing of terrorism (AML/CFT) framework is in place. This includes its role as the country's financial intelligence unit (FIU) and the AML/CFT supervisory authority for reporting institutions which consist of financial institutions[1], non-bank financial institutions (NBFIs)[2], and designated non-financial businesses and professions (DNFBPs)[3]. The Bank also serves as the chair and secretariat of the National Coordination Committee to Counter Money Laundering.

National Coordination Committee to Counter Money Laundering (NCC)

The NCC, which was established in 2000, has continued to drive coordination, implementation and monitoring of AML/CFT initiatives at the national level by serving as an inter-agency platform to ensure cohesive and responsive actions in tackling emerging and evolving money laundering and terrorism financing (ML/TF) risks. The NCC Roadmap 2021-2023 (NCC Roadmap) with 67 initiatives were developed to uphold the integrity of our national AML/CFT regime and the financial system, and at the same time, ensuring Malaysia's compliance with international standards set by the Financial Action Task Force (FATF). As at end 2022, one third of these initiatives have been completed or are progressing well for ongoing action plans, with the remaining two thirds on track to be completed by end 2023. Some of the initiatives carried out in 2022 are discussed in this chapter, including establishment of the National Scam Response Centre, formalisation of collaboration between the Bank and the Companies Commission of Malaysia (SSM), enhancement to supervisory practices as well as other awareness activities.

Sharing of Financial Intelligence[4] and Supporting Law Enforcement

The Bank, through the FIU, receives, analyses and discloses financial intelligence to relevant domestic law enforcement agencies and where relevant, to foreign financial intelligence units. The successful use of financial intelligence to combat crimes depends upon the quality and timeliness of suspicious transaction reports (STRs) and cash threshold reports (CTRs) received from reporting institutions. For this, reporting institutions are required to ensure its customers onboarding and transactions monitoring processes can effectively identify any behaviour or transactions that appear out of the ordinary, as no other parties have access to customers' accounts. Reporting institutions must

1 Refer to licensed banks, investment banks, Islamic banks, insurers, takaful operators, money services business; prescribed development financial institutions; approved issuers of designated payment instruments and designated Islamic payment instruments, financial advisers, Islamic financial advisers, insurance brokers, takaful brokers.

2 Refer to Lembaga Tabung Haji and institutions carrying on activities relating to building credit, leasing or factoring business.

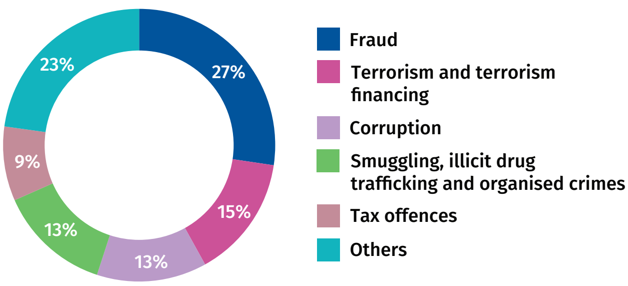
3 Refer to lawyers, accountants, company secretaries, trust companies, dealers in precious metals or precious stones, casinos, gaming businesses, registered estate agents, moneylenders and pawnbrokers.

4 Refers to information received and held by the financial intelligence unit (FIU), such as suspicious transaction reports, cash threshold reports as well as results of the FIU's analyses.

also ensure that their employees are adequately trained to pick up the irregularities in their engagements with customers. These would enable reporting institutions to report STRs to the FIU, in a timely manner. For greater operational efficiency, reporting institutions are increasingly adopting technological solutions for onboarding of customers and continuous transactions monitoring.

In 2022, 242,914 STRs were received, a 27% increase from 2021. Both STRs on fraud and money laundering offence continued to increase. High-risk crimes[5] represent approximately 70% of the FIU's disclosures to law enforcement agencies and foreign FIUs. The remaining 30% involved other crimes such as tax offences, human trafficking and illegal remittance. These disclosures resulted in the arrests of 51 individuals, freezing and seizing of assets of more than RM570 million as well as revenue recovery of RM372 million in relation to crimes such as organised crimes and tax offences.

Chart 1: Financial Intelligence Disclosures by Serious Offences in 2022



Note: "Others" include offences related to proliferation financing, human trafficking and migrant smuggling, illegal remittance, etc.

Source: Bank Negara Malaysia

Efforts were also taken to enhance reporting institutions' transactions monitoring capabilities for effective detection of suspicious transactions. In 2022, the Bank issued a number of advisories and reports to raise awareness among the reporting institutions on emerging risks and trends, common modus operandi and prevalent high-risk crimes. The Bank also held engagement sessions on the expected standards of suspicious transaction reporting. The goal is to improve reporting institutions' analytical capability for better quality STRs going forward.

[5] High risk crimes refer to fraud, corruption, organised crimes, smuggling and drugs trafficking, as identified under the National Risk Assessment on ML/TF 2020. In addition, terrorism, terrorism financing and proliferation financing are also deemed as priority from national security perspective.

Measures to Elevate and Coordinate Fraud Response

Fraud continued to rank as one of the top high-risk crimes in all three iterations of the national risk assessment (NRA) on ML/TF since 2013. One aspect of fraud that has been on the rise since the pandemic is online financial scams. Similar observations have been seen globally, where criminals have sought to exploit the pandemic to commit scams, fraud and cybercrime, resulting in the Financial Action Task Force (FATF) setting a priority to assess the challenges and related money laundering techniques, as well as facilitating the sharing of best practices with member countries.

Recognising the need for a coordinated rapid and effective response to combat online financial scams, the National Scam Response Centre (NSRC) was established in October 2022. The NSRC brings together a diverse range of resources and expertise from the National Anti-Financial Crime Centre (NFCC), Polis Diraja Malaysia (PDRM), the Bank and the Malaysian Communications and Multimedia Commission (MCMC) as well as financial institutions and telecommunication companies. The NSRC's detection of fund flows facilitated improvements in tracing and intercepting online scam proceeds. Diagram 1 provides more details on the NSRC's progress.

Given the cross-border nature of fraud, a regional initiative called the Multi-jurisdictional Anti-Fraud Project was undertaken in collaboration with the Singapore's Suspicious Transaction Reporting Office (STRO) and Indonesia's Financial Transaction Reports and Analysis Centre (INTRAC). The purpose of this project is to build a response mechanism for fraud cases that involve cross-border transactions between Financial Intelligence Consultative Group (FICG)[6] member countries with the aim to detect, trace and recover funds for the victims. This project will help members of the FICG share financial intelligence information quickly and easily, thus supporting swift actions by authorities to combat fraud and recover stolen money. The terms to govern the sharing of financial intelligence information between the FIUs is being finalised for adoption and is aimed to be fully operational by Q2 2023.

[6] The FICG is a regional body of Financial Intelligence Units (FIUs) from ASEAN 10, New Zealand and Australia. It is currently co-chaired by the Bank and Australian Transaction Reports and Analysis Centre (AUSTRAC).

Diagram 1: NSRC's Progress and Achievements in 2022

Public Assistance

Responded to 12,253 calls on online financial scams from public, of which 4,216 calls from scammed victims involving RM41 million worth of total losses.

Coordinated awareness campaign involving all NSRC members to share latest modus operandi /tactics on respective agencies' media channels for consistent and amplified messaging.

Recovery & Enforcement

Identified 9,198 new mule accounts for actions by financial institutions to prevent multiple layering of money to conceal the origin of the illicit funds.

Opened 554 investigation papers involving cheating and issued freezing orders on targeted collection accounts amounting to RM14 million.

Reduced time taken to trace and block online financial scam proceeds from months to hours.

Established a structured inter-bank communication mechanism for the tracing and interception of stolen funds.

Use of network analysis capabilities to support investigations, including the identification of scam syndicates.

Prevention by Financial Institutions

Immediate action on mule accounts - blocked / terminated / reported to regulators/ shared among financial institutions.

Improved indicators for financial institutions' due diligence, risk assessment and fraud indicators based on inputs received.

Source: Data from NSRC as at December 2022

AML/CFT Supervision to Elevate Compliance Culture

The Bank's supervisory oversight in relation to AML/CFT compliance covers a vast number of reporting institutions (approximately 30,000). Given this coverage, we maintain a risk-based approach, that is to apply our supervisory focus and resources based on the materiality and risk of each institution. Additionally, the Bank continues to leverage on SupTech to facilitate analysis of large, granular data received from reporting institutions as well as data from other sources for early detection of risks and better compliance oversight.

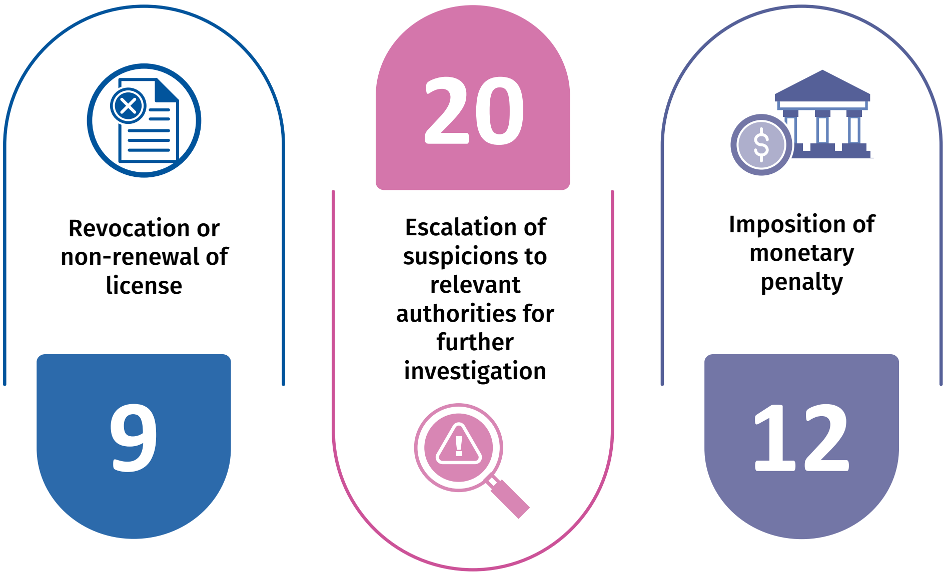
Supervision of the Financial Sector

In 2022, the Bank intensified reviews on specific AML/CFT concerns and risk areas, particularly those identified in the NRA 2020 findings. Specifically, the Bank undertook reviews on correspondent relationships, corruption, fraud and targeted financial sanctions. The review of financial sector's compliance with requirements in managing correspondent relationships revealed that acceptable measures are in place as part of their due diligence assessments to mitigate potential ML/TF risks[7].

The Bank's usage of SupTech to monitor the money services business since 2017 has allowed for more targeted reviews on the industry. This enabled a more effective supervisory intervention to deter illegal activities and non-compliances involving money services businesses. Diagram 2 provides supervisory interventions triggered by analytical outcomes in 2022.

[7] The review on effectiveness of financial sector's control measures in managing risks from corruption, fraud and targeted financial sanctions is still on-going.

Diagram 2: Interventions Triggered by Analytical Outcomes in 2022 Involving Money Services Businesses



Source: Bank Negara Malaysia

To improve overall standards of AML/CFT risk management by reporting institutions, the Bank shares outcomes of reviews conducted in the form of thematic reports. These set out best practices in the industry and our minimum AML/CFT expectations. One such report is from the thematic review on AML/CFT control measures to combat mule accounts. This review was conducted amid heightened levels of scams detected between 2019 to 2021. Among others, the review found that most of the banking institutions rely on traditional transactions monitoring mechanisms that are not ideally designed to detect mule accounts. Given the limitations of traditional transactions monitoring methods, particularly in picking up transaction patterns over time that do not fit the risk profiles of the mule account owners, banking institutions must expedite adoption of data analytics for advanced transactional and customer behaviour analyses, considering the evolving risks and methods. For banking institutions with areas for improvement, the Bank issued supervisory letters requiring concrete plans to address the gaps identified.

Beyond the thematic reports, the Bank also expanded information-sharing across the financial industry. In 2022, the Bank organised the inaugural compliance dialogue for the non-bank electronic money issuers to discuss compliance concerns and implementation challenges. The session included discussions on the latest modus operandi of fraud schemes, as well as supervisory concerns and expectations to elevate compliance levels.

Supervision of Designated Non-Financial Businesses and Professions (DNFBPs) and Non-Bank Financial Institutions (NBFIs)

As the competent authority, the Bank conducts AML/CFT supervision on DNFBPs and NBFIs. The Bank's risk-based supervisory approach on these sectors has evolved since 2016[8]. In 2022, the Bank has taken more stringent enforcement approach on identified non-compliances in order to instil greater compliance culture, including the issuance of Directive Orders[9].

The Bank continued the use of its off-site monitoring tool, the refined Data and Compliance Report (DCR)[10] to require more granular data and compliance information. In 2022, with further refinements in the

[8] In 2016, the Bank established a dedicated supervisory unit to oversee AML/CFT matters for DNFBPs and NBFIs in light of the growing sophistication and complexity of ML/TF risks from these sectors.

[9] Refer to an order issued pursuant to section 22 of the AMLA 2001 to direct a reporting institution to carry out remedial measures of non-compliances within a certain duration failing which the reporting institution can be liable for a fine. Under section 92 of the AMLA 2001, the Bank may also, with the agreement of Deputy Public Prosecutor, issue compound for non-compliance.

[10] DCR is one of the supervisory tool adopted by the Bank as the competent authority, which allows the Bank to assess the reporting institutions' exposure to ML/TF risks while allowing reporting institutions to self-assess and understand their compliance to the AML/CFT requirements. The DCR is issued pursuant to sections 8(3)(a), 16(6) and 25(2) of the AMLA 2001 read together with section 143(2) of the Financial Services Act 2013 and section 155(2) of the Islamic Financial Services Act 2013.

process, the DCR submission by reporting institutions increased by 55% from the previous year. This wide-ranging risk and operational data collected from reporting institutions via DCR, complemented with the use of data analytics, led to improved understanding of institutional level ML/TF risks and efficiency of supervisory processes. With this, the Bank was able to more accurately identify reporting institutions with higher ML/TF risk exposures and areas of high ML/TF risks for targeted supervisory attention. The reporting institutions were also informed on the specific areas for improvement at institutional level.

Over the years, the Bank has fostered progressive informal collaborations with other regulatory and supervisory authorities of DNFBPs. This enables the Bank to better coordinate and combine efforts with respective authorities' to jointly achieve an effective AML/CFT supervisory oversight. In 2022, the Bank formalised its partnership with the Companies Commission of Malaysia (SSM), as the regulatory authority for company secretaries and trust companies, through a Terms of Collaboration (TOC). This has led to more collaborative initiatives such as the joint issuance of DCR, and SSM led joint on-site examinations on company secretaries. The Bank and SSM also jointly issued a "Reference Note on Beneficial Ownership for Legal Persons" to clarify respective regulatory expectations. Similar arrangements with other self-regulatory authorities in the legal and accounting sectors are planned in the near future.

A multi-pronged awareness strategy was adopted for DNFBPs and NBFIs given the large number of reporting institutions. In 2022, the Bank conducted 47 engagement sessions to communicate its regulatory and supervisory expectations. This was complemented by industry-led AML/CFT programmes, led by certified industry experts from the Bank's 'Train-the-Trainer' programme which was introduced in 2021. The Bank also continued to produce regular newsletters on AML/CFT topics to ensure DNFBP sectors are updated with latest developments.

Going Forward

The Bank is committed to upholding the integrity of the Malaysian financial system by ensuring compliance to AML/CFT standards to detect and prevent abuse by criminals. In doing so, our efforts will continue to focus on the three key thrusts in relation to AML/CFT measures as outlined in the Financial Sector Blueprint 2022 – 2026:

1. Enhance integrated efforts and improve coordination to better prevent, detect, disrupt, and dismantle financial crimes at the earliest opportunity;
2. Deepen our understanding of emerging and higher ML/TF risk areas and develop appropriate policy responses; and
3. Encourage industry-led collaborative initiatives to elevate compliance culture.

Managing the Bank

Managing the Bank

Managing the Bank

People

In 2022, the Bank continued to modernise the work environment and adapt to a changing and diverse workforce. Our goal is to create an environment where our people can thrive and be their best selves towards enhancing the Bank's productivity.

The COVID-19 pandemic has provided the Bank with an opportunity to fundamentally rethink the way we work. During the lockdown, new practices such as remote working and online real-time collaboration became default practices. These quick changes allowed us to keep our operations running smoothly. To further enhance our productivity, we continued to focus on:
- improving people's engagement in the digital era;
- rethinking people operations[1];
- enhancing organisational agility; and
- strengthening our talent pipeline.

Improving People's Engagement in the Digital Era

A key priority for the Bank is ensuring an optimal working environment for our people. Considering this, we reviewed what it means to work effectively and equipped our staff with an expanded set of productivity tools. We also focused on improving team engagement and strengthening teamwork and understanding of interlinkages and interdependencies among our employees.

During the pandemic, we experimented with different work arrangements such as remote working and split operations while ensuring the health and safety of our staff. While the Bank was able to function without any interruption, new employees faced challenges in connecting with their colleagues due to lack of interpersonal relationships, coupled with stress and anxiety associated with remote working and adapting to a new workplace. To address this, we gradually increased in-office work from once to twice a week throughout 2022 to

Khairul Nadzrin Kairul Zaman
Manager, Foreign Exchange Policy

Even after almost 10 years in the Bank, the past few years upended how I approached work. This was not made any easier being a working parent, having to balance both career and family at the same time. However, the Bank makes sure its employees can do this and supports us in every way they can. The flexible working arrangements introduced by the Bank enables me to work remotely, while balancing and attending to the needs of my two kids. Thanks to this, the relationship between my family is now stronger than ever, allowing me to also give 100% commitment in my work.

[1] People operations is the business function and processes for managing and developing an organisation's workforce. It is a people-centric approach that focuses on what people experience as employees within the organisation to improve their productivity, growth, and satisfaction.

As a working parent, flexibility is the most important benefit to me and my wife. My kids, like every other kid in the world, were affected by the pandemic. They require more attention and help to catch up with learning and education. The Bank's full-time childcare service (Tunas Kijang) provides working parents like me with peace of mind. The facility and education of Tunas Kijang are top-notch, providing my kids with the highest quality of early childhood education.

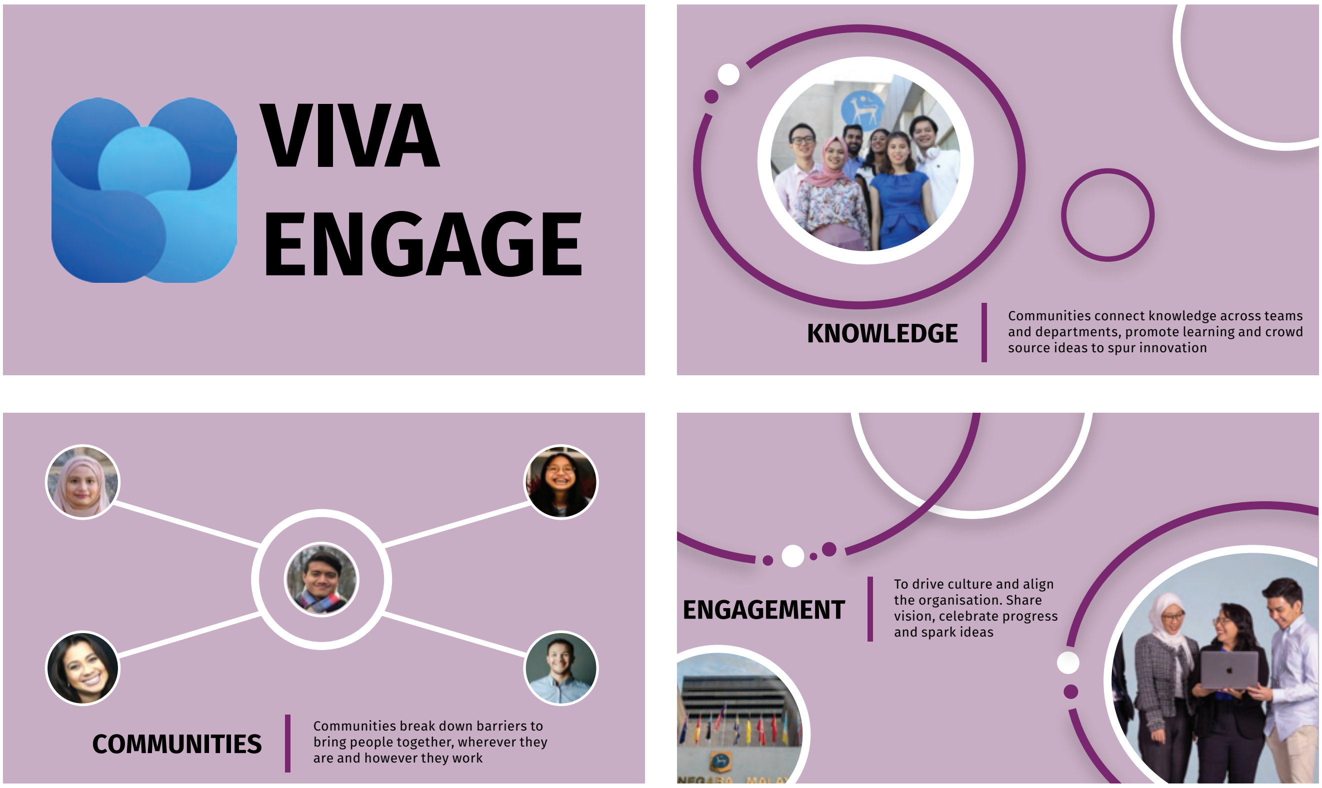
On the occasion that I do have to come into office, I look forward to engaging my colleagues in a relaxed and collaborative setting. The Bank entrusts us with tools and flexibilities so that I can focus on being my best for my team.

promote face-to-face interactions, especially for new hires and to foster team bonding. Beginning 2023, staff have the option to work remotely two days in a week.

Technology adoption was significantly ramped-up for collaboration, enhanced productivity, and to achieve business objectives. We developed in-house applications to drive operational efficiency, facilitate better decision making, and strengthen risk management practices while improving internal processes in these areas. We also improved internal platforms for social networking where our people engage and create communities – for work and non-work topics, as well as keep up to date with happenings around the Bank (Diagram 1).

Throughout 2022, the wellbeing of our people remained a focus – as the pandemic could have a lasting impact on the mental and physical wellbeing of our staff. In-house counselling services and peer support groups were accompanied by staff-led initiatives to increase mental health awareness and reduce stigma (Diagram 2). We also introduced training programmes to help supervisors coach and mediate their team members through stress and work-related challenges.

Diagram 1: Social Networking to Connect People Across the Bank



Source: Bank Negara Malaysia

Diagram 2: Organisational Security Management Department's Wellness Programme: Nutrition Awareness Talk Series 4 - *Jangan Pendam, Jom Kongsi: Cara Mengekalkan Minda Sihat*

Source: Bank Negara Malaysia

To emphasise the importance of connections among our staff, we organised our first family day event since the pandemic for staff in both our headquarters and regional offices. The event was attended by more than 7000 Bank employees and their family members. Additionally, in 2022, we held our annual staff-organised treasure hunt as an in-person event.

Our core aim is to ensure that we have a strong culture and an engaged workforce that keeps us effective as an organisation. This considers the new challenges that we are facing as a central bank, where the landscape is becoming increasingly complex and uncertain. To this end, we have articulated five Cultural Beliefs that are aligned with these evolving realities – in particular, to emphasise the importance of agility, collaboration, and excellence as an organisation (Diagram 3). This serves to reinforce desired norms and habits, such as open and candid discussion as well as a sharp awareness about the interdependencies across various teams and areas of work. Our commitment to this cause is reflected in the sponsorship at the highest level of the Bank. We also regularly check in with staff at all levels to understand their experience of the changing workplace and the workplace culture. We envision that this will foster an even greater sense of belonging and ownership for our people, resulting in a more fulfilling and meaningful professional experience. More importantly, this environment will be crucial to bring out the best from our staff, so that the Bank operates at the highest level of effectiveness and professionalism in delivering its mandates.

The Bank held numerous physical events in 2022

Diagram 3: Our Cultural Beliefs

Source: Bank Negara Malaysia

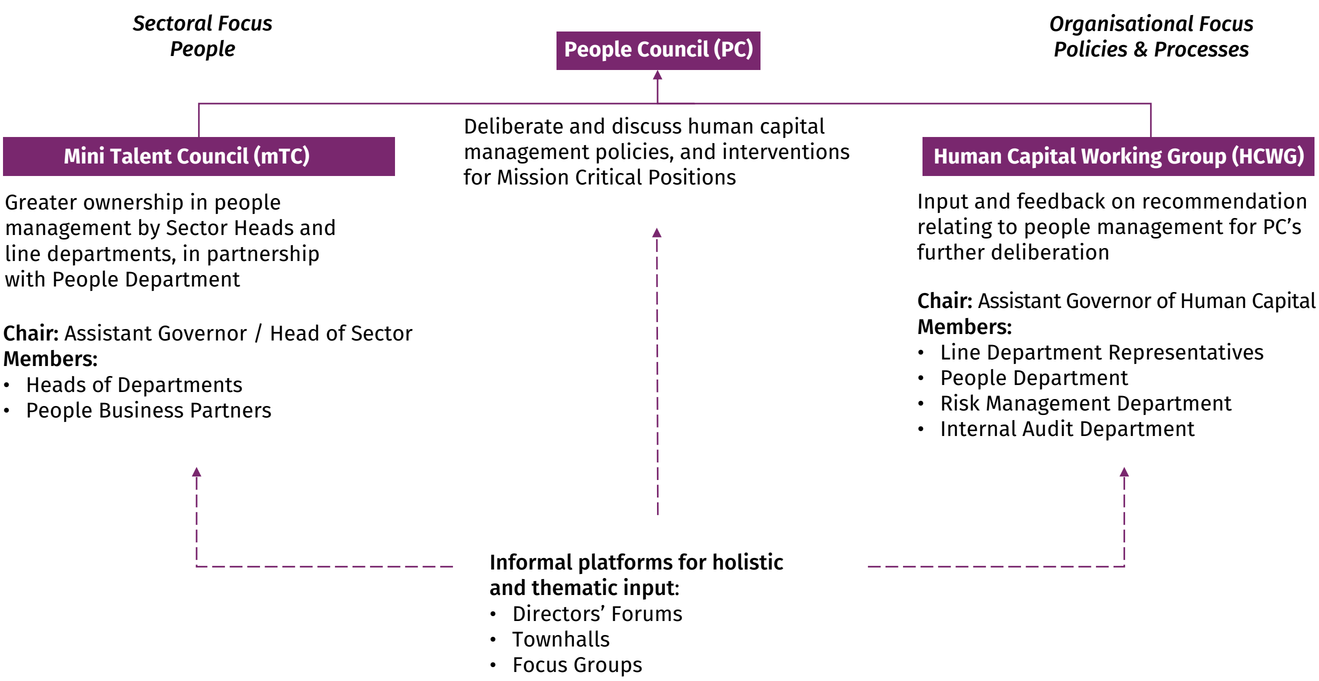
Rethinking People Operations

As the way we work changes, the Bank also elevated its people operation practices. The streamlining of human capital related departments in the previous year has begun to yield its intended outcomes.

A cornerstone of the refreshed People Department was the setting up of a Technology and People Analytics function. This team is responsible for tools and analytics that enable us to gain more reliable insights into talent needs and better measure workforce performance and productivity. The goal is to provide more transparency and ownership of data to supervisors in managing their people. To complement observations from data, our People Business Partners cultivate strong relationships with department heads to diagnose and resolve talent issues speedily, thus allowing them to focus on delivery of their mandates. There has been positive reception from department and sectoral heads from these efforts.

The newly established People Council (PC) is the apex decision-making committee for people matters (Diagram 4). This creates greater visibility and efficiency in developing policies and interventions pertaining to people operations. Proposals to the PC are first deliberated by a Human Capital Working Group (HCWG) to incorporate feedback from line businesses. The PC is replicated within each of the Bank's job sectors through Mini Talent Councils (mTC) chaired by the respective sectoral head. This way, managers take more responsibility for making decisions about managing their employees as part of our regular business activities.

Diagram 4: Multiple Platforms Across the Bank to Engage and Solicit Input for People-Related Decisions



Source: Bank Negara Malaysia

Enhancing Organisational Agility

The Bank worked on making its operations and processes better throughout the year. This is part of our effort to make sure our employees can respond to new issues and changes in the domestic and global environment. We realigned functions within the Bank, helped staff move up in their careers, and adopted more agile staffing approaches for important projects and policies to get the most out of our talent.

In 2022, we placed our communications team in the Monetary Stability division to better deal with current issues. We also combined our data science and economic research teams to work together better and use artificial intelligence to strengthen economic analysis and surveillance. Our data science capabilities were used throughout the Bank, ranging from analysing financial stability and market behaviours to monitoring fraudulent activities and making the organisation work better.

On the operations front, we established the Centralised Procurement Department to consolidate our procurement processes to increase efficiency and provide best value-for-money outcomes for the Bank. In addition, we are currently reviewing the Bank's currency management and operations function to improve the currency ecosystem and generate thought leadership in the future of currency management. We also embarked on outsourcing arrangements for several functions including transport services, museum shop operations, and other general services. This is to help us focus on tasks that are more related to our mandates and simplify our business operations.

Another key aspect of organisational agility is facilitating internal mobility and promoting interdisciplinary approaches to better respond to increasingly complex mandates. Towards this end, we streamlined the salary structure across the organisation as part of our rewards strategy to promote talent mobility and unlock career pathways.

We also adopted a talent marketplace approach to rapidly pull together diverse skill sets from across the Bank to deliver key projects and policy initiatives. This was effectively used for major initiatives that required collaboration from all areas of the Bank, such as identifying financing gaps in the economy (including green finance), formulating the right regulatory posture to promote innovation in the financial system, and enhancing both the regulatory and developmental ecosystems for the insurance and takaful industry.

Strengthening Our Talent Pipeline

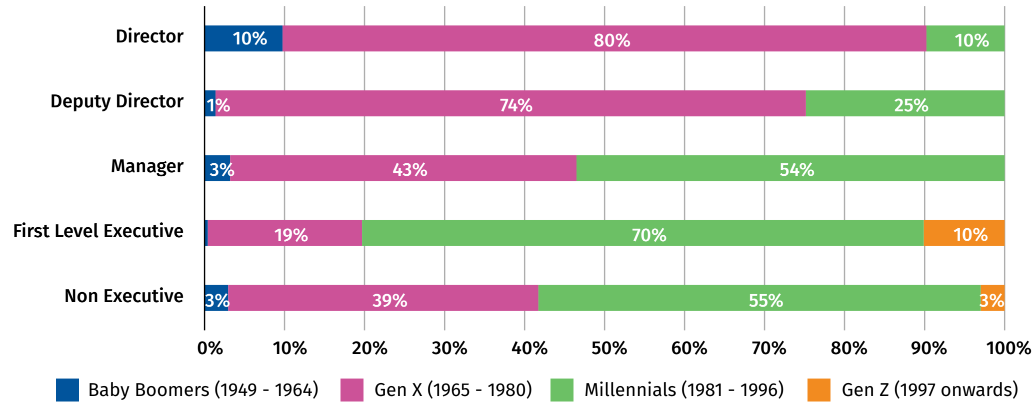
Our main priorities are to help our staff grow in their careers and continuously develop and sharpen their skillsets. In 2022, almost 60% of job openings were filled by existing employees through promotions and transfers to other departments. We also emphasised leadership development, with new training programmes on problem-solving and impactful communication. A cohort of supervisors are getting certified as professional coaches to help mentor new and younger employees. This is important since most of our staff are millennials (Diagram 5). In 2022, our coaches-in-training spent a total of 556 hours doing group and individual coaching sessions.

To build a pipeline of talented and diverse workforce (Diagram 6), we introduced the Kijang Graduate Programme (KGP) in 2021. The programme selects graduates from atypical backgrounds such as biomedical sciences and English literature to bring unique perspectives to the central bank. In 2022, we expanded the KGP to returning scholars to help them network early in their careers. We now have 153 Graduate Analysts across three intakes. After completing the programme, participants can pursue careers as central bankers in various functions across the Bank.

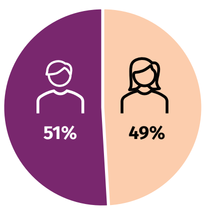
To help our staff tackle increasingly complex challenges, we continued to prioritise their development (Diagram 7). We addressed existing needs while also exploring emerging and future areas. For instance, we introduced a Central Banking Interlinkages programme in 2022, which focuses on the interconnectedness of the Bank's monetary and financial stability mandates, as well as their trade-offs. This complements our staff scholarship programme which supports our people to pursue post-graduate qualifications in various fields of study such as fintech, climate change and Shariah jurisprudence. In 2022, the Bank also awarded scholarships to 47 young Malaysians to pursue their pre-university and undergraduate programmes.

Diagram 5: Gender Balanced and Multi-Generational Workforce

Millennials make up the largest segment, at 59% of the Bank's workforce



Headcount 3220



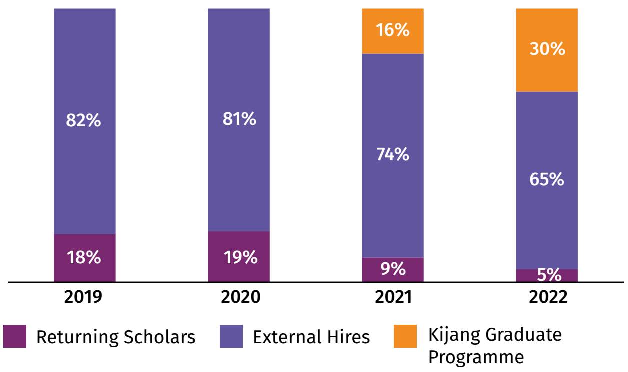
Job Level	Gender Composition	
Senior Management	58%	42%
Managers	43%	57%
First Level Executive	44%	56%
Non-Executive	64%[1]	36%

[1] Higher percentage of male non executive staff is attributed to our Auxiliary Police

Note: Data as at 31 Dec 2022

Source: Bank Negara Malaysia

Diagram 6: Our Source of Talent



Source: Bank Negara Malaysia

To maintain organisational adaptiveness, we continue to encourage our staff to obtain professional certifications across a broad range of disciplines. Presently, 606 staff hold memberships from professional bodies and credentials recognised by the Bank. We also upskilled our people to adapt to new ways of working. In 2022, 246 administrative staff were enrolled into a structured curriculum to elevate their capabilities in areas such as digital fluency, office management, communication, and stakeholder relationships. With remote now working being the norm, we focused on enhancing cyber hygiene practices among employees by conducting compulsory training sessions and introducing mandatory staff attestations on cybersecurity management. Please refer to Chapter 2.3 Risk Management and Internal Controls for a further review of our efforts to stay ahead of cyber threats.

We have a long journey ahead, but we have made progress toward our goal of creating an ideal workplace, and our efforts have been recognised. In 2022, we received the Most Preferred Employer award in the government sector at the GRADUAN Brand Awards.

Akash Nair

Digital Graduate Analyst, September 2021 Intake

As I come towards the end of my stint in the Kijang Graduate Programme (KGP), I look back and all I can say is that it's been a very fulfilling journey. Right from the start of the programme I was pleasantly surprised with how efficient and interesting the onboarding process was. It gave me a good overview of the Bank's departments and its functions.

As a digital graduate analyst, the three rotations I chose consisted of data science teams within different sectors, which naturally meant I had a lot to learn. Personally coming from a Theoretical Physics background, I had a decent amount of exposure to Python programming, but applying it to projects within the Bank was very different and something I gradually got used to. I was also given ownership of certain projects and this was where I had to learn how to manage various stakeholders.

Overall, I would say there is a steep learning curve, but my seniors and colleagues in the Bank were welcoming and helpful. This allowed me to learn the ropes and settle in quickly. I am confident that any incoming KGP would have as good an experience as I have had as the Bank is a fantastic place to kickstart your career.

Ho Yi Duan

Deputy Director (Actuary), Insurance & Takaful Supervision

After 12 years in the Bank, I decided to pursue a Master in Central Banking (MCB) at the Asia School of Business (ASB) to power up my technical and leadership skills. The MCB is a year-long residential programme with a six-week immersion programme at MIT Sloan School of Management.

Through MCB, I gained a more integrated understanding of the central bank mandates and functions in both monetary and financial stability, and a better appreciation of interlinkages between different risk areas in the financial system.

I learned useful data-driven analysis techniques that link academic research to practical application, which can support robust policymaking. The curriculum emphasised systems thinking, best practices and innovation, while the assignments simulate practical problem-solving by central banks in normal and crisis scenarios.

I'm more perceptive towards nuances of central bank governance and roles in working with various stakeholders. Most enjoyably, I got to interact and strengthen relationships with other central bankers, researchers, and industry practitioners through the programme.

Nur Aziantie Abdul Hamid
Associate Executive, Strategic Communications

As a diploma holder, I joined the Bank as an administrative officer in 2009. Throughout the years, I've worked in several functions across the Bank including our museum and art gallery, currency operations and hospitality. Since day one, I was very eager to explore new opportunities in developing my capabilities and grow my career. Thankfully, my colleagues have been encouraging and provided me exposure. Everyone is passionate in supporting others to explore, discover, and learn.

I took the opportunity to join several courses offered by the Bank which include designing infographics, creating databases in spreadsheet software, and enhancing my presentation skills. I was able to apply these new skills to perform my tasks more meaningfully, manage my projects more effectively, and develop my strategic thinking and problem-solving capabilities.

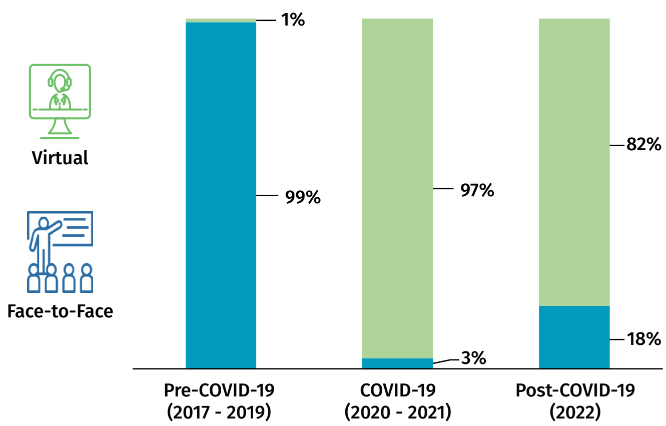
All the support and development that I've received gave me the confidence to apply for and successfully secure a promotion as an executive in 2022. I would like to encourage others to believe in yourself and keep chasing opportunities, wherever they may be!

Diagram 7: Continuous Development for Staff, Through Various Channels

Learning and development (L&D) investment over gross salary:
3.5%
[3-year average (2019-2021): 5.2%]

Average learning hours per executive:
50 hours
[3-year average (2019-2021): 44 hours]

Face-to-Face vs Virtual Learning



Notes:
- The prominent method of learning continues to be through virtual channels. This brought down the cost of our L&D investment as virtual learning is generally more affordable and accessible.
- As we phase back to normalcy, our people have had more opportunities to participate in face-to-face learning.

Source: Bank Negara Malaysia

BNM receiving the Most Preferred Employer award in the government sector at the Graduan Brand Awards Gala Dinner, 4 December 2022

Way Forward

We are keeping up with the changing landscape of work and strive to ensure our employees continue to perform well and grow. In 2023, the Bank has commissioned an independent manpower audit to recommend an optimally sized organisation in a modern and digitalised environment to deliver our mandates for the next three years. We are also reviewing our physical office space to make sure it has the technology and infrastructure that is fit for our purpose, while implementing a digital operations platform to improve processes in people, finance, and procurement management. With these investments, we hope to achieve greater productivity and efficiency through a hybrid work model that supports both in-office and remote work.

Towards a Greener Financial System

Adaptation and mitigation efforts are key to achieve a climate resilient economy for Malaysia. The economic transition also creates abundant growth opportunities. The financial sector plays a critical role in enabling and supporting the orderly and just transition of the Malaysian economy.

Introduction

During the year, the Bank continued to make steady progress in its efforts to address climate-related risks, in line with our mandates to promote monetary and financial stability, as well as in our own operations. We continue to focus on strengthening the financial sector's climate resilience. Scaling up financing and protection support needed by businesses to reduce their carbon footprint was also given emphasis. We made further progress in greening our own operations and advancing research to better understand how climate and nature interact with each other and with the financial system and economy.

Over the four years of our climate journey, we have worked to gradually establish the key pillars of climate resilience within the financial sector. These include a framework for classifying assets based on alignment to climate outcomes, regulatory and supervisory expectations on managing climate risks, climate-related disclosure requirements and infrastructure to meet critical data needs. These pillars have helped accelerate efforts by financial institutions to better fulfil their role in spurring an orderly and just transition to a greener economy.

A large number of financial institutions now consider climate change in their operations, risk management and business decisions. This affects how they form strategies, manage risks, carry out processes, and offer products and solutions (Diagram 1). More financial institutions have also started actively engaging their customers on the topic of climate risks and transition plans.

Diagram 1: Progress Observed in the Financial Industry in 2022

Out of 66 financial groups

41	51	43	48	50	>RM110b
have set climate targets	have a dedicated department or cross-departmental setup for sustainability	have reflected climate risk in their risk appetite statements	have developed dedicated sustainability strategies and frameworks	offer green products and solutions	financing allocated for Environment, Social and Governance (ESG) up to 2025

Source: Bank Negara Malaysia

Climate Considerations Embedded Across the Bank

The Bank is committed to lead by example. Our Board and senior management provide strategic steer to advance the Bank's climate resilience agenda. This includes providing direction on developing the policy landscape, sharpening research focus, strategising collaboration with regional peers, engaging stakeholders and adopting sustainability in our own practices. The Board and senior management receive regular updates on progress of initiatives related to climate across the Bank, financial industry and wider ecosystem. This is led by the Sustainability Unit, a dedicated function set up to coordinate and drive the Bank's climate initiatives.

The Unit works closely with line departments within the Bank in delivering climate outcomes. This ensures that our overall climate strategy is well-aligned and progresses in a coordinated manner. Issues relating to different aspects of the Bank's response to climate risk are deliberated at the relevant policy committees of the Bank. These include the Financial Stability Committee, Monetary Policy Committee, Operational Management Committee and Management Committee. The Bank expanded our enterprise risk appetite statement to include risks arising from nature-related changes. We also continue to actively engage with central banks and financial regulators at the regional and international levels. This allows us to exchange views and experience on responses to this critical challenge.

Steady Progress in Advancing the Climate Agenda

In 2022, we continued to integrate climate considerations in our core functions (Diagram 2). We issued policy documents to provide clarity on the expectations we place on financial institutions to effectively manage their climate risks. We also supported pilot projects[1] that are being developed with the industry and relevant government ministries. These are solutions that support the transition to a low carbon economy and build climate resilience. In addition, we continued to engage the industry on preparations to implement climate-related reporting and disclosures.

Technical expertise in climate risk is still developing within the Bank. We thus continue to invest resources to build competence of our staff. Knowledge is developed through structured training programmes and knowledge sharing sessions organised with experts from the industry and academia. In 2022, our staff at all levels, including senior management, participated in several such sessions on climate-related topics relevant to the Bank's work and operations. We are also intensifying work to deepen our understanding on areas such as possible impacts of sectoral transition pathways on our economy and financial sector. This will help enhance our understanding on the potential policy steps that can be taken.

The Bank also ramped up efforts to better manage emissions arising from our operations. One example is by exploring energy efficiency measures. We have begun to track sustainability metrics, including our electricity use, water use, and plastic waste. We will continue to enhance the way we approach and measure our emissions. This will also support our current efforts to develop a roadmap to net zero that guides the Bank's actions towards achieving our climate goals. We expect to complete the roadmap in 2023. We continue to raise awareness on our climate initiatives amongst staff in line with a whole-of-Bank approach. This is done via a range of channels, including newsletters, vodcasts and forum posts.

These efforts are in line with the Bank's pledge on our commitments in relation to climate risk management, disclosure and capacity building as a member of the Central Banks and Supervisors Network for Greening the Financial System (NGFS) in supporting the NGFS Glasgow Declaration for the 26th United Nations Climate Change Conference (COP26) in 2021.

[1] E.g. agritech, flood parametric solutions.

Diagram 2: Progress and Outcomes of Climate Initiatives in 2022

Financial Regulation & Supervision

Building a facilitative regulatory landscape and enhancing climate resilience in the financial sector

- Issued Climate Risk Stress Testing Exercise (CRST) Discussion Paper for consultation (June) and Climate Risk Management and Scenario Analysis (CRMSA) Policy Document (November).
- Engaged with financial institutions to improve data integrity following the first Climate Change Principles-based Taxonomy (CCPT) reporting submission in July 2022.
- Commenced work to integrate climate risks into supervisory assessments.

Capacity Building

Increasing internal competence

- Climate Risks and Sustainable Finance Training Programme in collaboration with SOAS University of London, involving staff across multiple sectors.
- Specialised technical training sessions for staff, e.g. operationalisation of CCPT for supervisors, climate risk analysis.

Diagram 2a: Climate Risks and Sustainable Finance Training

Objective	Develop expertise in sustainable finance and in risk assessment for climate and environment.

- Key risks, concepts and principles
- Climate in macroeconomic and monetary policy
- Scenario analysis and stress testing
- Climate in prudential frameworks
- Sustainable finance solutions
- Climate in central bank portfolios

Macroeconomic & Monetary Policy

Enhancing macroeconomic surveillance and forecasting

- Development of country-level modelling tools to support holistic assessments of the impact of climate risk on the economy, including under different macroeconomic policy assumptions.
- Research on decarbonising the Malaysian economy.

Investment

Factoring sustainability in investments

- Integrated ESG factors into the portfolio construction process by optimising portfolio allocation in terms of risk-adjusted returns based on ESG ratings.
- Align portfolio allocation with key ESG metrics such as improvements in ESG and environmental ratings and Paris-aligned greenhouse gas (GHG) emissions targets.

Source: Bank Negara Malaysia

Diagram 2: Progress and Outcomes of Climate Initiatives in 2022

Financial Development

Green finance and investment

- Focused outreach to enhance small and medium enterprise (SME) awareness and knowledge on how to access support to help with transition to sustainable and greener practices.
- Launched the Greening Value Chain (GVC) Programme to assist SMEs that are part of global supply chains to green their operations.

Diagram 2b: Greening Value Chain (GVC) Programme

Strategic Partners[2]

MGTC	GHG emissions assessment training programme
esgbook	Guides ESG reporting
PANTAS	Software for GHG emissions measurement
bsi.	ESG reporting assurance services

Financial Institutions

Transition financing (Low Carbon Transition Facility)

Features of technical training

Impact of climate change on businesses	How climate change affects different aspects of businesses
Climate change related regulations	Implication of Carbon Border Adjustment Mechanism and climate disclosures on business operations
Consultation session and site visit	Complimentary advisory and diagnosis by service providers
Technical and financial assistance	Overview on available tools and funding

Corporate Sustainability

Reducing the Bank's carbon footprint

- Developed internal dashboard to track sustainability metrics of the Bank's operations.
- Developed the Bank's emissions profile.
- Initiated work to develop long-term target and roadmap for the Bank, with support from external experts on footprinting[3] and emissions target setting.
- Recycled over 200 kilograms of electronic waste, and reduced plastic consumption by 95% compared to 2021 by switching to paper-based alternatives at the Bank's cafes.
- Limited increase of electricity usage to 10% compared to 2021 despite staff transitioning from working from home to working in Bank premises up to 3 days a week.
- Minimised GHG emissions from currency operations by promoting digital payments, recirculating fit banknotes and prioritising recycling practices.

[2] For first pilot.
[3] Footprinting is the process to measure the total amount of GHG emissions associated with all the activities of an entity.

Source: Bank Negara Malaysia

Leveraging Synergies Through the Joint Committee on Climate Change (JC3)

The Bank and the Securities Commission Malaysia (SC) continued to work closely with the financial industry via the JC3 to hasten and align the sector's response to climate change.

Key outputs of the JC3 include the publication of additional guidance (in the form of FAQs) as reference in implementing the CCPT, and an Application Guide to support financial institutions in preparing to adopt the Task Force on Climate-related Financial Disclosures (TCFD) recommendations (Diagram 3). The JC3 also finalised a Climate Data Catalogue that serves as a source of reference on climate and environmental data for the financial sector. The Catalogue is also a call to action for data providers to collectively improve availability and accessibility of climate data (Diagram 4). To support transition efforts, the JC3 coordinates initiatives between the Bank, industry and relevant government ministries and agencies to develop and implement pilot projects to scale up green finance. These projects relate to themes such as adaptation, sustainable cities and transition finance. The JC3 continued to lead capacity building efforts for the industry on key technical areas covering topics like scenario analysis and climate-related disclosures. The JC3 also worked in partnership with the Value-Based Intermediation Community of Practitioners (VBI CoP). Following consultations with the JC3, the VBI CoP finalised the Value-based Intermediation Financing and Investment Impact Assessment Framework (VBIAF) sectoral guides on oil and gas, manufacturing, and construction and infrastructure. These are in addition to the sectoral guides on palm oil, renewable energy and energy efficiency issued in 2021. The sectoral guides provide sector or transaction level guidance in implementing the CCPT.

Playing Our Part in the 'Whole-of-Nation' Response to Climate

During the year, we forged closer ties with many government ministries and agencies. This includes forming an interagency working group between the JC3 and relevant ministries and agencies[4]. This platform enables exchange of relevant information and ideas, and cooperation on the implementation of pilot projects. This has helped the financial sector to better align its efforts in support of national climate priorities.

The Bank and the JC3 were part of Malaysia's delegation to the 27th United Nations Climate Change Conference (COP27) in November 2022 in Sharm el-Sheikh, Egypt. We took part in several panel discussions hosted at the Malaysia pavilion and the United Nations Development Programme pavilion. The panels discussed topics such as the role of finance in managing climate risk, taxonomies for sustainable finance, and financing opportunities for nature. We also took part in the NGFS Fireside Chat on capacity building and training. The Governor also provided remarks during the Forests and Climate Leaders Partnership Summit at the invitation of the UK government.

Contributing to Regional and International Thought Leadership

On the global front, we strive to contribute to the global discourse on actions needed to address the challenges faced by Malaysia and other emerging and developing economies in tackling climate risk. Massive funding, knowledge and technological advancements are still needed to address the disproportionate impact we face from climate change. Through our participation in international bodies such as the NGFS and other fora, we continue to provide an important perspective on transition challenges for smaller and developing countries, including middle income economies. We aim to help advance global collective action to improve climate equity and avoid a disorderly transition.

The Bank is part of the ASEAN Taxonomy Board, established in March 2021 to develop, maintain and promote the ASEAN Taxonomy for Sustainable Finance (ASEAN Taxonomy). The ASEAN Taxonomy sets out a common system to classify sustainable economic activities. It will guide businesses and investors in pursuing green and transition activities. It will also

[4] Ministry of Finance, Ministry of Natural Resources, Environment and Climate Change (formerly Ministry of Environment and Water and Ministry of Energy and Natural Resources), Ministry of Economy (Economic Planning Unit) and Ministry of International Trade and Industry.

Diagram 3: Application Guide for the Adoption of TCFD

The application guide serves as a resource to facilitate the adoption of TCFD[5] recommendations by financial institutions.

Basic Recommendations	Stretch Recommendations
Financial institutions to **implement all basic recommendations within 24 months and by 2024**	Financial institutions to adopt **depending on their overall climate risk exposure and/or complexity of operations**

Disclose:

Governance

Basic Recommendations

- Foundational elements, e.g.–
  - Board oversight and management's role in assessing and managing climate-related issues
  - Boards' sustainability credentials and capacity building

Stretch Recommendations

- Set up of a separate committee on climate-related matters which reports to the board, with clear roles and responsibilities

Strategy

Basic Recommendations

- Climate-related risks and opportunities and impacts on business model and performance
- Strategy and risk appetite on climate risks

Stretch Recommendations

- Climate scenario analysis to–
  - Assess business implications of climate-related risks and opportunities under different conditions over time
  - Formulate strategies to manage these risks

Risk Management

Basic Recommendations

- Integration of climate-related risks into existing risk management, including processes to–
  - Identify and assess these risks
  - Manage these risks, including risk management processes and controls
  - Integrate the above into overall risk management

Stretch Recommendations

- Integration of climate-related risks into existing risk management, including processes to–
  - Identify and assess significance, size and scope of these risks
  - Enhance institution preparedness to manage these risks
  - Integrate the above into overall risk management

Metrics and Targets

Basic Recommendations

- Key climate-related metrics (e.g. GHG emissions), and contextualise the metrics in relation to other financial indicators
- Key climate-related targets based on recognised metrics

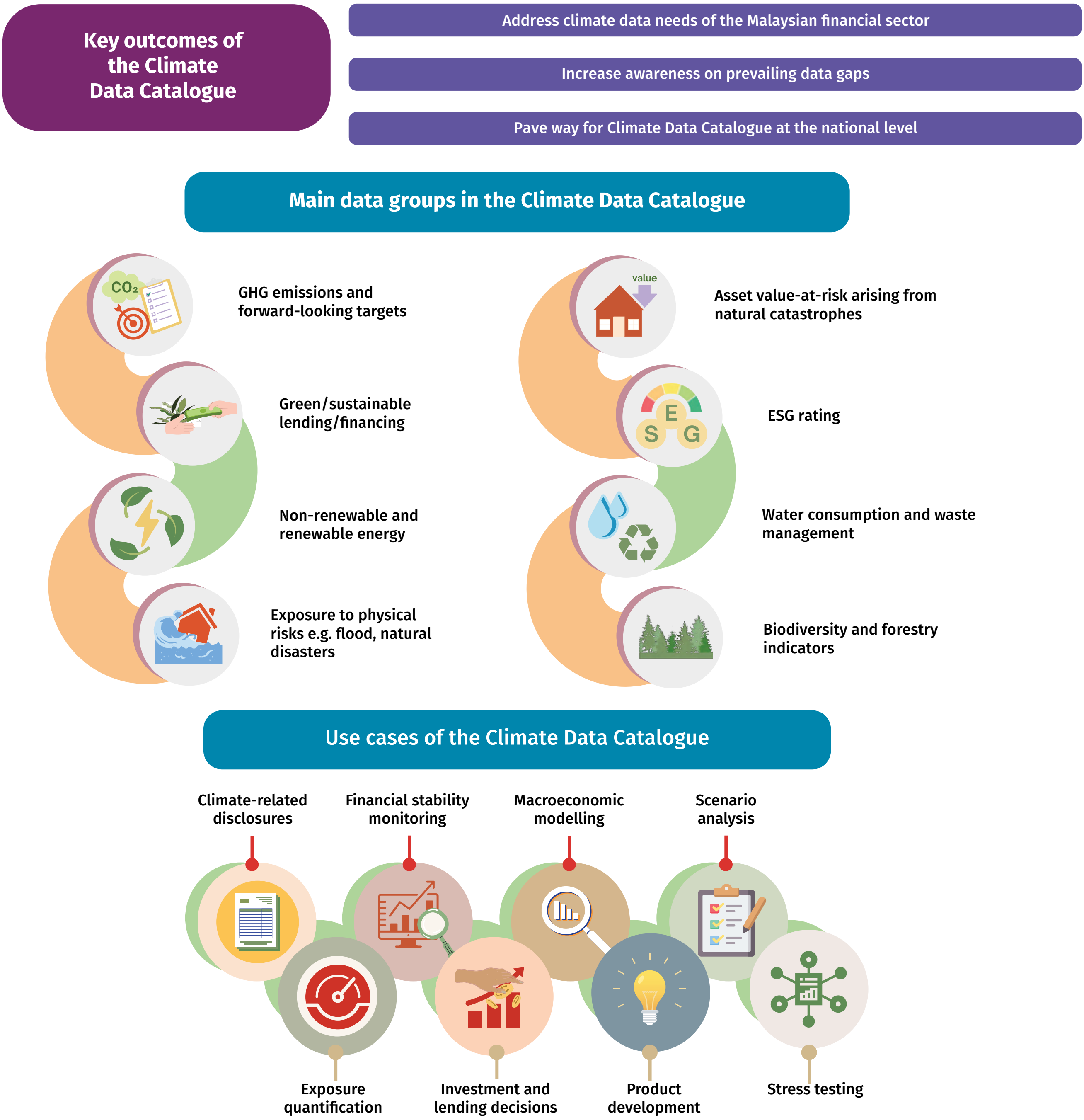
Stretch Recommendations

- More complex key climate-related metrics, taking into account forward-looking analysis (e.g. absolute scope 3 GHG emissions[6])

[5] The TCFD was established to help identify information needed to support informed investment, lending and insurance underwriting decisions and improve understanding and analysis of climate-related risks.
[6] Scope 3 emissions are indirect emissions that arise in the value chain of the company's business activities, including financed emissions.

Source: Joint Committee on Climate Change

Diagram 4: Climate Data Catalogue



Source: Bank Negara Malaysia

Governor Nor Shamsiah Yunus offering remarks at the Forest and Climate Leaders Partnership Summit at COP27

Madelena Mohamed (Director of Sustainability Unit; centre) as panellist at the Advancing our Climate Journey: The Role of Finance panel at COP27

support the flow of inclusive transition finance to the region. To cater to the diversity of ASEAN Member States, the ASEAN Taxonomy adopts a multi-tiered approach comprising two main components – the Foundation Framework and the Plus Standard. The Bank led the development of the Foundation Framework. The Bank is also active in developing thresholds for the identified focus sectors under the Plus Standard.

Further, we supported The South East Asian Central Banks (SEACEN) Research and Training Centre in developing and rolling out the ASEAN Core Curriculum on Climate Risk Resilience/ Sustainable Finance. The curriculum consists of a series of training blocks on climate risks and the challenges they pose to financial and macroeconomic stability.

The Bank also benefits from being part of NGFS workstreams and taskforces, most notably as co-chair of the Task Force on Capacity Building and Training, alongside the Bank for International Settlements (BIS). The Bank also co-chairs the Expert Network on Data with the Deutsche Bundesbank. In addition, the Bank remains actively engaged in climate-related work undertaken by the Basel Committee on Banking Supervision, the International Association of Insurance Supervisors and Executives' Meeting of East Asia Pacific Central Banks. These avenues allow our staff to contribute to global developments in managing climate risks and financing transition.

Governor Nor Shamsiah Yunus as a panellist at the Bank of Thailand 80th Anniversary Conference with BIS

Deputy Governor Jessica Chew delivering opening remarks at the Cagamas Developing and Financing Green Housing in Asia Conference

Going Forward

'Going green' is important for the country for two key reasons. The first is to manage and mitigate risks associated with the inevitable impact of climate change – both physical and transition risks. The aim is to ensure that our economy, and by extension businesses and individuals, are not adversely affected by climate change. The second is to enable Malaysia and its citizens to benefit from the opportunities offered by the green transition. This means greater job opportunities, higher income and overall shared prosperity.

Achieving net zero for Malaysia will require upwards of RM350 billion in investments[7]. Both the government and the private sector, alongside the international community, have a critical role in achieving these goals. Transitioning to a climate-resilient economy entails high costs and risks. The government needs to help absorb some of the risks or reduce the overall cost especially for the vulnerable segments such as

[7] Sivaprasad, D., Chin, V., Tak, H., Ming, T.K., Ching, F.O., Kwong, J., Chan, H., Iyer, L.L.R. (2021) Securing our future: Net zero pathways for Malaysia. WWF, Boston Consulting Group, Malaysia.

SMEs. This could take the form of grants, guarantees and tax benefits. Blended finance mechanisms where both public and private sector monies are used to fund high risk transition and adaptation activities are also important. For the financial sector, they can channel finance to activities that are climate friendly or those that support green transitions. Innovative products need to be developed to distribute risk, encourage investments and better serve the needs of consumers. For Malaysia, it is also important that these measures do not lead to financial exclusion and a further widening of income gaps. This ensures that those most vulnerable to climate change and often contributing least to it, are not disproportionately affected.

The Bank will continue to focus efforts on strengthening climate resilience in the financial sector and enhancing its capacity to support transition and adaptation activities. This builds on the progress achieved in recent years (Diagram 5). We will continue to refine our regulatory and supervisory approach as appropriate to adequately reflect risks and with domestic considerations in mind. Ongoing work with the government and industry to improve the ecosystem around green and sustainable finance will also be ramped up. This includes bridging data gaps and developing products and solutions. We will also continue to maintain close engagements with key stakeholders to foster sustained collaboration. Sharing of resources and undertaking joint capacity building are among such efforts. Finally, we will continue to strengthen internal competence and awareness to green our own operations.

Diagram 5: The Bank's Key Focus Areas for 2023

1 Risk management

- Research to examine financial and monetary stability implications of climate change. Focus areas include the economy's exposure to flood risk and coal transition.
- Support financial institutions in credible implementation of the CCPT.
- Continue preparation for CRMSA implementation and industry-wide CRST.
- Support financial institutions in adopting TCFD recommendations.

2 Engagement and capacity building

- Support government initiatives in critical priority areas.
- Develop more structured capacity building programmes for a wider group of staff. This includes a comprehensive curriculum and capacity building pathways tailored to various sectors.
- Engage and collaborate with the business community, including SMEs to support their transition journey.

3 Bridging data gaps

- Bridge prevailing data gaps and improve accessibility of critical climate-related risk data for financial institutions.

4 Leading by example

- Develop the Bank's medium- and long-term climate targets and implement our Operational Sustainability Plan.
- Compile relevant data to calculate Scope 1, Scope 2, and Scope 3 GHG emissions.

5 Product and innovation

- Implement pilot programmes for green solutions to catalyse and scale up financial sector support.

Source: Bank Negara Malaysia

Measuring the Journey towards a Low Carbon Economy

Malaysia targets to become a net zero greenhouse gas (GHG) emissions nation as early as 2050. Following this, the government is working to develop the Long-Term Low Emissions Development Strategy (LT-LEDS). The LT-LEDS aims to articulate actionable programs and policies which are needed today to deliver measurable GHG emission reductions aligned with the aims of the United Nations Framework Convention on Climate Change (UNFCCC). This will also support Malaysia's orderly and just[1] transition to a low carbon, climate-resilient economy as early as 2050. The LT-LEDS also helps to identify areas of opportunities for the different sectors. The LT-LEDS is therefore a crucial policy tool to enable businesses and financial institutions to align their own strategies to reduce their GHG emissions.

While the LT-LEDS is being finalised, the government has also laid out plans to put in place key enablers and infrastructure to facilitate the transition towards a low carbon economy. These include plans to introduce a legislative framework, and a carbon pricing framework. The launch of the Bursa Carbon Exchange (BCX), a voluntary carbon market, on 9 December 2022 is a further step forward. The BCX allows businesses to meet climate targets through trading of carbon credits from activities or projects that reduce or avoid GHG emissions. This article focuses on carbon accounting which underpins carbon pricing and trading systems and enables progress on climate goals to be reliably measured. It reviews key elements and approaches to carbon accounting, and its importance in the context of Malaysia's net zero ambitions.

Carbon accounting as a critical enabler for transition

A clear, consistent and credible carbon accounting framework - also known as GHG accounting is a key enabler for the transition towards a low carbon economy. Carbon accounting provides a framework for measuring climate impacts of GHG emissions. This will therefore enable the setting of targets to limit and reduce emissions and to identify new growth areas. Conceptually, one can think of carbon accounting like financial accounting. Both are a form of measurement framework that promotes accountability. Both also allows one to compare performance across entities, industries and time in a consistent and reliable manner. Measuring the amount of carbon dioxide (and its equivalent) emitted by businesses from direct (scope 1) and indirect (scope 2 and scope 3) activities allows for credible monitoring, reporting and verification of GHG emissions (Diagram 1). This then enables carbon emissions to be priced accordingly based on emission targets.

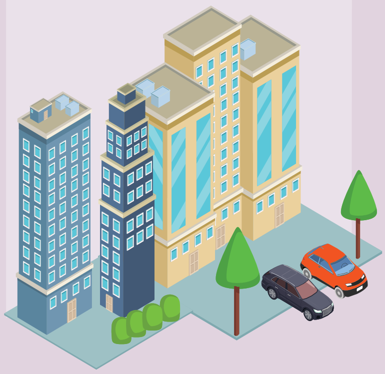
Mandating carbon accounting can result in greater impact on GHG emissions reduction. To achieve this, several important preconditions must be present. The relevant regulatory and reporting systems and infrastructure need to be in place to support credible GHG reporting by companies. Having a legislation in place will facilitate effective enforcement. Further, a focus on building the knowledge and capabilities within businesses is also critical (Diagram 2). Having the relevant data to facilitate monitoring and verification will support future enhancements to the framework to ensure its continued relevance and effectiveness.

[1] A just transition aims for all segments of the business community and society to be able to benefit from the country's transition to a low carbon economy and that no-one is left behind. This involves providing the necessary support including tools, know-how and reskilling opportunities, to enable the more vulnerable communities such as the SMEs and lower income households to adapt and make the adjustments needed and minimise short-term impacts.

Diagram 1: Greenhouse Gas Protocol – Carbon accounting categories

Carbon Accounting
Method to count, inventory, calculate and report GHG emissions (often used interchangeably with GHG accounting)

Direct emissions	Indirect emissions
Scope 1	**Scope 2**
Company facilities Company vehicles	Purchased electricity, steam, heating & cooling for own use
	Scope 3
	Purchased goods & services Capital goods Fuel & energy-related Transportation & distribution Waste from operations Travel & commute Leased assets Investments



Source: GHG Protocol

Diagram 2: Pre-conditions to implement a national carbon accounting framework

Legislation	Regulatory framework	Centralised online MRV system	Capacity building
Mandate carbon accounting and reporting of emissions in line with international frameworks	Clear guidelines and procedures detailing requirements for monitoring, reporting and verification	Facilitate data submission/collection, verification, monitoring and analysis	Knowledge and technical assistance for carbon accounting, measurement and reporting

MRV - Measurement, Reporting and Verification

Source: Based on benchmarking assesment of various jurisdictions

Carbon accounting frameworks

There are several carbon accounting frameworks in use globally. The choice of framework is purpose-dependent. At the national level, countries follow the guidelines formulated by the Intergovernmental Panel on Climate Change (IPCC).[2] Based on the IPCC guidelines, countries need to prepare and submit GHG inventories in line with the core principles as shown in Diagram 3. Countries that are signatories to the UNFCCC, including Malaysia, follow the IPCC guidelines when submitting the biennial reports on GHG inventories to the UNFCCC.

Diagram 3: Principles of a Good Carbon Accounting Framework

Source: UNFCCC

Malaysia's 2020 biennial update report to the UNFCCC highlighted that the major sources of GHG emissions were from the energy sector (79.4% of total emissions). This provides important insights for policy formulation. It helps direct the focus of policymakers to develop transition strategy for the energy sector.

The IPCC Guidelines is intended for use at the national level as it serves to facilitate country reporting. Its use at entity level is less appropriate as the IPCC Guidelines does not provide granular guidance on activity-based emissions. In addition, the IPCC methodology only includes direct emissions which is insufficient to inform operational and strategic decisions at entity level. As such, entities often adopt a different framework to measure their own emissions (Diagram 4). Each framework adopts a different methodology. For example, the Greenhouse Gas Protocol provides best practices for calculating GHG inventories. Meanwhile, ISO14064 focuses mainly on processes and is typically used for verification. Understanding the methodology underlying the frameworks and their limitations is important to ensure that the information captured and produced is fit-for-purpose, properly interpreted and analysed, and any responses are made on an informed basis.

Common carbon accounting frameworks typically adopt several approaches to measuring carbon emissions. The approaches are spend-based, activity-based, and/or a hybrid approach (Diagram 5).

[2] IPCC is a scientific body commissioned by the UNFCCC

Diagram 4: Commonly used carbon accounting frameworks

Common Carbon Accounting Frameworks

- **Greenhouse Gas Protocol**
- **The EPA GHG Inventory Guidance**
- **The Climate Registry General Reporting Protocol (GRP)**
- **ISO Standard 14064**

Source: Corporate Finance Institute

Diagram 5: Approaches to measure carbon emissions

Emissions data can be estimated via the following approaches

1 Spend-based Approach

Financial value of a purchased good/services multiplied by an emission factor ($/$CO^2$e)

Example: Business travel emissions based on price of a plane ticket multiplied by industry average emissions level

2 Activity-based Approach

Raw data from organizational activities across the supply chain quantified into emissions data (Activity Metric/CO^2e)

Example: Business travel emissions based on the plane model, fuel used, class of ticket and actual flight route

3 Hybrid methodology

Activity-based data across the supply chain and spend-based approach for other areas (CO^2e)

Example: Business travel emissions based on combination of (i) historical data about the flights taken if available and (ii) cost of ticket (price) based on company expenses data multiplied by national average emissions level otherwise

Source: Greenhouse Gas Protocol

The Greenhouse Gas Protocol recommends the hybrid methodology, which is the most used carbon measurement methodology given its pragmatic approach.[3]

[3] While it is usually more accurate to use information about activities of a business to measure how much carbon it is producing as compared to the spend-based data, such information is not as readily available and can be time consuming to gather.

Importance of carbon accounting for businesses

There is growing demand from shareholders and investors for climate-related disclosures from their investees. This includes disclosures on GHG emissions to facilitate their investment decisions and meet regulatory requirements. Financial institutions that have pledged net zero targets are similarly requiring GHG emissions disclosures as they start to assess and disclose GHG emissions from their loans and investments. Similarly, large asset owners and asset managers at the top of the investment chain are making significant strides to provide better climate-related financial disclosures that support climate targets. This is shaping financing and investment decisions. As a result, the ability of businesses to accurately measure and report emissions is becoming more important for businesses to tap the needed capital at a potentially lower cost. Governments and regulators around the world are also increasingly looking to accelerate progress on climate goals and improve disclosures on carbon emissions (Diagram 6).

Diagram 6: Current and Emerging Regulatory Requirements on Climate and Sustainability Disclosures

International Sustainability Standards Board requirements*

- Global baseline of sustainability disclosures to meet information needs of investors in assessing enterprise value
- Companies are expected to disclose absolute gross GHG emissions level

Impact to Businesses

- **Access to capital** – Investors and financial institutions will require businesses to enhance disclosures e.g.metrics and targets
- **Enterprise valuation** – Businesses long-term viability is assessed based on their adaptability in integrating climate-related risks and opportunities

Carbon Border Adjustment Mechanisms

- Carbon tariffs/fees applied on imported goods based on GHG emissions generated during their production

Impact to businesses

- **Price competitiveness for exports** – Higher price as fees/carbon tariffs will be imposed on goods exported to imposing jurisdiction
- **Potential gain/loss in market share** – Suppliers along the supply chain may gain or lose market share should their client decide to switch to “greener” suppliers.

Bursa Malaysia sustainability reporting framework

- Enhanced sustainability reporting requirements for Main and ACE markets

Impact to businesses

- **Access to capital –** businesses with clear sustainability commitments have better access to financing or investments
- **Penalty for non-compliance –** listed companies that do not adopt may face enforcement actions by Bursa Malaysia which includes potential delisting

*Draft standards

Source: Compilation from various regulatory announcements

Carbon accounting is key to Malaysia’s journey towards achieving its net zero ambitions

At present, some form of sustainability disclosure is already required for listed entities in Malaysia. Plans are underway to enhance such disclosures to include GHG emissions.[4] For financial institutions, mandatory disclosure based on the TCFD[5] recommendations will commence from 2024. Broader mandates that also include other entities to measure and disclose their carbon emissions would complement these efforts in ensuring that commitments are turned into action.

A national carbon accounting framework provides a consistent approach for assessing GHG emissions and enables targets to be set at the entity, sector and national levels to limit these emissions. More jurisdictions, including in this region, have recently introduced GHG reporting frameworks (Diagram 7). Carbon emissions can then be priced accordingly based on these targets to influence business decisions and behaviours.

[4] Bursa Malaysia requires listed entities to disclose Sustainability Statement which covers among others, aspects on governance and strategies since 2016.

[5] The Task Force on Climate-Related Financial Disclosures (TCFD) under the Financial Stability Board has developed a framework to help entities provide more effective financial disclosures relating to climate. The framework comprises four components namely governance, strategy, risk management, and metrics and targets.

Diagram 7: GHG Reporting Frameworks and Systems In Selected Jurisdictions

Singapore

Guideline on GHG Measurement and Reporting (M&R) Requirements

- Registered corporations are required to compile and submit an Emissions Report annually for each facility that is subject to the Carbon Pricing Act. Submission is made via the Emissions Data Monitoring and Analysis (EDMA) system.

Philippines

The Philippine Greenhouse Gas Inventory Management and Reporting System

- Institutionalise the GHG inventory management and reporting system.
- The Philippine GHG Inventory and Reporting Protocol Manual for Business provides guidance to companies and enterprises on GHG accounting and reporting at the organisational level.

Australia

National Greenhouse and Energy Reporting (NGER) Scheme

- A single national framework for reporting and disseminating company information about GHG emissions, energy production, energy consumption and other information as specified under the NGER legislation.

United Kingdom

Streamlined Energy and Carbon Reporting (SECR)

- Organisations are required to align their reporting methodology with the latest available guidance for GHG reporting published by Department for Business, Energy & Industrial Strategy (BEIS) and Department for Environment, Food & Rural Affairs (Defra) which covers GHG emissions and SECR.

Source: Respective government websites

In Malaysia currently, measurement is based on data obtained through various sources such as the relevant government agencies and publications. For example, data to measure emissions for the energy sector is sourced from the National Energy Balance (NEB), other government agencies and the private sector. In areas where national level data is not available, international data is used. Extrapolation as per the IPCC Guidelines would be carried out in instances where data for certain periods is not available. There are now plans to develop country-specific emission factors[6] for key sectors. This would form a good basis for the government to develop the national level carbon accounting framework going forward. In the long run, the framework will provide a baseline for the government to develop and scale market mechanisms such as compliance carbon markets. This in turn will be critical to further accelerate climate action in Malaysia towards its net zero goals and mitigate adverse impacts from a disorderly transition.

[6] Country-specific emission factors are developed by taking into account country-specific data, such as carbon content of the fuels used, carbon oxidation factors and fuel energy content.

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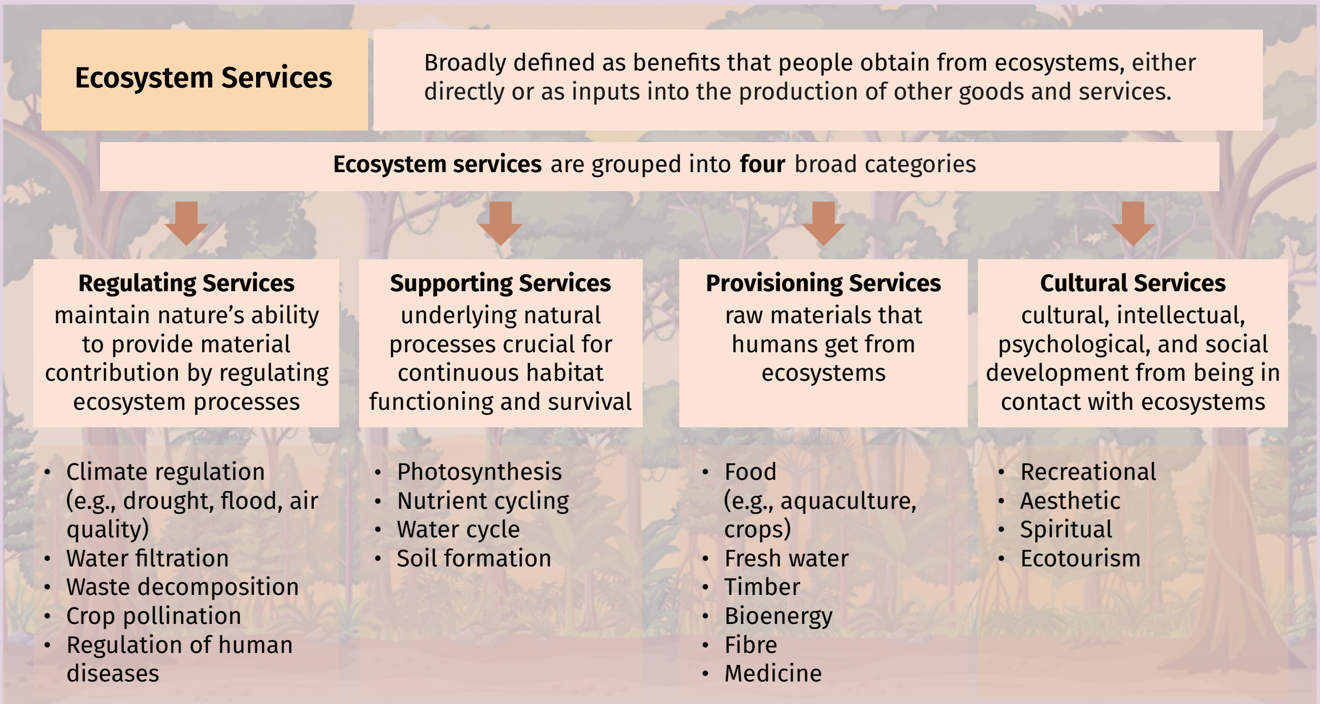
Biodiversity Loss: Implications on the Economy and Financial Stability

We rely on nature and its ecosystem to survive. Biodiversity in an ecosystem consists of various species of plants, microbes, fungi, and animals which exist and interact with each other. These species also interact with other non-living elements such as water, soil, and the sun. Humans have benefitted from these interactions within the ecosystem. The benefits are many such as supply of food, raw materials, water, and clean air. Well-functioning ecosystems also help to prevent rise in temperature. As such, it is important to maintain a balance in the ecosystem. This will ensure humans and economies can continue to benefit from nature and ecosystem services in a sustained manner (Diagram 1). The importance of biodiversity to lives and livelihood, however, is often overlooked. In the context of risks, there has been much discussion on the importance of assessing climate-related risks to our economy and financial sector, but risks arising from biodiversity loss have received little attention. This article explains the interactions between biodiversity loss and climate change, assesses how biodiversity loss affects our economy and banks, and the Bank's focus going forward.

Diagram 1: Interconnection between people, biodiversity, ecosystem health, and provision of ecosystem services



Source: Illustration from WWF's Living Planet Report (2012)

Understanding Malaysia's biodiversity

Malaysia is one of the world's megadiverse countries.[1] We are ranked 12^{th} on the National Biodiversity Index[2] (Diagram 2). Natural resources (such as oil and timber) and abundant ecosystem services (such as healthy soils and clean water) have directly contributed to the country's economic development. Various economic activities use ecosystem services either as inputs to production and operations, or as subjects of research and development (WEF, 2020). From an ecological perspective, biodiversity is integral in sustaining overall planetary

[1] A megadiverse country has at least 5,000 endemic plants and a marine ecosystem within its borders. In 1998, Conservation International identified 17 megadiverse countries (Brazil, Indonesia, Colombia, China, Mexico, Australia, Peru, India, Ecuador, United States of America, Venezuela, Papua New Guinea, Myanmar, Vietnam, Malaysia, Democratic Republic of Congo and Tanzania).

[2] National Biodiversity Index (NBI) is based on estimates of a country's richness and endemism in four terrestrial vertebrate classes (i.e., amphibians, reptiles, mammals, and birds) and vascular plants. The NBI includes some adjustment allowing for country size and countries with land area less than 5,000 square kilometres to be excluded. There are 191 countries assessed under the NBI.

health. Forests, peatlands, wetlands, soil, and oceans play a key role in absorbing and storing carbon. The natural ecosystems help to protect humans from the impact of climate change that leads to natural disasters such as floods and storms.

Diagram 2: Biodiversity in Malaysia

Source: 6th National Report of Malaysia to the Convention on Biological Diversity (December 2019)

Interactions between biodiversity and climate change

Nature-related risks refer to risks from the decline or loss of ecosystem services, biodiversity, and natural assets (such as water and forests). Excessive extraction and usage can deplete resources over time and cause harm to the society and economy. Excessive economic development activities could also degrade ecosystem services. These include deforestation, pollution, overfishing, land-use change[3], and other human activities that drive habitat loss and fragmentation. Climate change is also accelerating biodiversity loss and reducing the resilience of ecosystems. This heightens nature-related risks which in turn can put the viability of businesses and lives at risk. Businesses that are highly dependent on ecosystem services for ongoing business operations are most exposed to such risks. Holistic and carefully designed measures that promote responsible usage, or replenish the resources, are therefore essential to preserve lives and livelihoods.

Nature- and climate-related risks are closely connected. As with climate change, nature-related risks can manifest in physical, transition, and liability risks (Diagram 3). These risks can also lead to financial and economic losses due to a diminished capacity to adapt and build resilience against adverse events. A World Bank study[4] assesses how much damage would be caused if certain parts of the ecosystem, like marine fishing, wild pollination, and timber supplies in the ecosystem were reduced by 90%. The study found that in East Asia and the Pacific region, this could lead to a loss of 3.4% of the GDP by 2030 compared to the baseline scenario. In Malaysia, the loss is expected to be even bigger at 6% of GDP by 2030 due to adverse impacts from the collapse of Malaysia's forestry and fisheries ecosystem services (Johnson et. al, 2021).

[3] Land-use change is the transformation of natural landscape driven by human activities, either for economic and/or cultural purposes (e.g., agricultural, residential, industrial, mining, and recreation).

[4] The World Bank study "The Economic Case for Nature: A Global Earth-Economy Model to Assess Development Policy Pathways" (Johnson et. al, 2021)

Diagram 3: Nature loss and climate change

Nature loss reduces resilience to climate change

- Loss of forests as water catchment areas exacerbates the effect of droughts.
- Bare, deforested mountaintops carry worse landslides during extreme rainfall.
- The loss of forests also means the loss of carbon sinks.

Climate change is a driver of nature loss

- Increased GHG emissions changes the water cycle and alters soil temperature and humidity.
- Extreme weather events affect wildlife and destroy habitats.
- Oceans soaking up too much carbon lead to ocean acidification, which harm marine life.

Source: Intergovernmental Panel on Climate Change (IPCC), Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Diagram 4: Financial and economic implications of nature-related risks

Nature-related Physical Risks

- Drought due to climatic events
- Earthquakes due to geological events
- Change in marine ecology

↓

Deterioration and loss of ecosystem services that businesses depend on for survival

Nature-related Transition Risks

- Changes in policy
- Changes in consumer preferences
- Changes in technology

↓

Businesses with significant harm on biodiversity may see abrupt reduction in their asset valuations

Nature-related Liability Risks

- Businesses held responsible for loss or injury associated with climate event and thus required to compensate affected parties
- Businesses sued for continuously contributing to nature loss and not taking practical steps

Physical risk

- Extreme weather events
- Gradual changes in climate
- Sea level rise

- Loss of ecosystem services
- Interactions with other ecological issues (e.g., climate change)

Transition & Reputation risks

Changes in:
- Policies
- Technology
- Consumer preferences

Liability risk

- Stakeholder litigation

↓

ECONOMY

- Supply chain disruptions
- Raw material price volatility
- Productivity changes
- Stranded assets

- Changing demand and costs
- Relocation of activities
- Legal liabilities

- Increase in energy prices
- Cost of improving resilience and adaptation

- Limited substitutability of ecosystem services

↓

FINANCIAL SYSTEM

- Credit risks (e.g., losses on corporate portfolio)
- Market risks (e.g., losses on shares and bonds/sukuk)
- Underwriting risks (e.g., inaccurate risk assessments)
- Operational risks (e.g., liability risks, legal costs, reputational damages)
- Liquidity risks (e.g., refinancing risks)

Legend: Climate-related risk | Nature-related risk

Source: Bank Negara Malaysia

The Bank also worked with the World Bank to study how nature, our economy, and the financial sector are connected. The study looks at the exposures of our banks to sectors and regions that are highly vulnerable to biodiversity loss and other nature-related risks. Key findings are published in a report titled "An Exploration of Nature-Related Financial Risks in Malaysia" (the Report) (Diagram 5).

Diagram 5: Key findings from the report "An Exploration of Nature-Related Financial Risks in Malaysia"[5]

- **54% of the commercial lending portfolio could currently be exposed to physical risk** due to being highly or very highly dependent on one or several ecosystem services.
- **Most prominent individual ecosystem services include surface water, ground water, flood and storm protection as well as climate regulations**. Climate regulation entails natural carbon sinking mechanism which helps dampen the impact of climate change (Chart 1.1).
- **87% of the commercial lending are channelled to sectors which highly or very highly impact various natural assets and ecosystem services** i.e., real estate activities (17%), wholesale trade (11%), construction of buildings (10%), civil engineering (6%), and retail trade (5%).
- **Commercial lending contributed to the proliferation of the following impact drivers** which in turn severely affected ecosystem services and natural assets: GHG emissions (61%), water use (56%), and terrestrial ecosystem use (43%) (Chart 1.2).

Chart 1.1: Dependency on ecosystem services (physical risk)

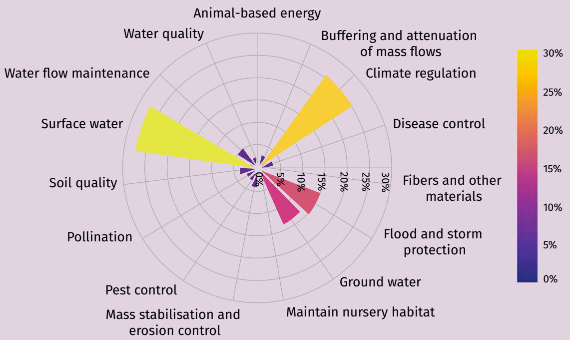
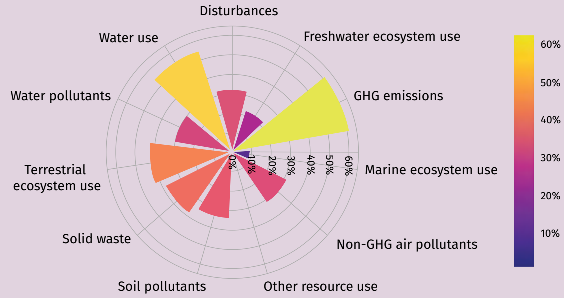
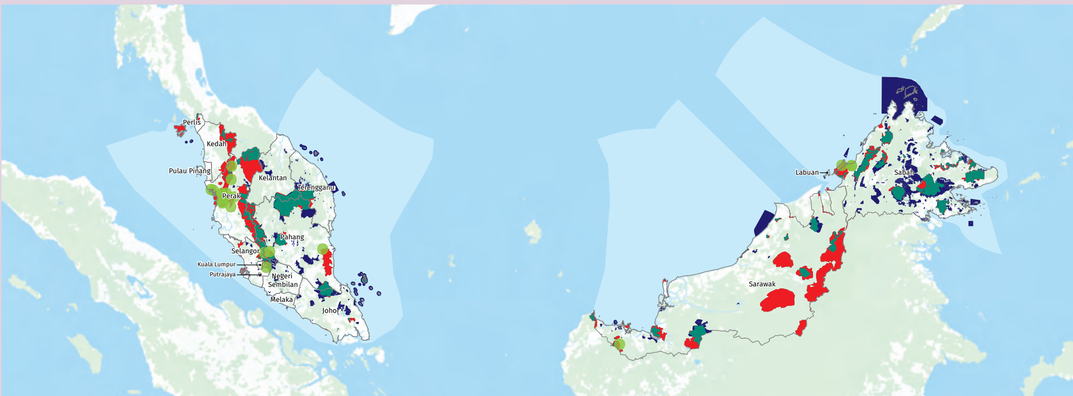


Chart 1.2: Impact of business activities on ecosystem services (transition risk)



Source: ENCORE, BNM, WB calculations

Chart 1.3: Commercial residential and non-residential purchase lending exposure by postal code area of Malaysian banks to non-protected Key Biodiversity Area (KBA)



Non-protected key biodiversity areas | Protected key biodiversity areas | Currently protected areas | Financial exposure

Source: Department of Statistics Malaysia (DOSM), Integrated Biodiversity Assessment Tool (IBAT), Birdlife International Partnership, Alliance for Zero Extinction, BNM (unpublished data), Humanitarian Data Exchange 2021, WB calculations

- **Key Biodiversity Area (KBA) are sites that contribute significantly to maintaining global biodiversity and thus are important candidates for future protective regulation**. Enforcement of existing protected areas and creation of new protection areas could pose significant nature transition risk to the Malaysian banking sector and the real economy.
- RM 329 million (USD 78 million) of commercial lending are granted to firms actively operating in locations that are currently non-protected KBA. This is a conservative estimate due to limitation in the available dataset. Sectors that are typically active in non-protected KBA are agriculture and mining.
- More than 60% of commercial lending exposure are in areas that are either not protected i.e. KBA at this current juncture or in areas with limited biodiversity i.e. Kuala Lumpur and Selangor (Chart 1.3).

Source: Bank Negara Malaysia

[5] Report on "An Exploration of Nature-Related Financial Risks in Malaysia" can be accessed here: https://www.bnm.gov.my/documents/20124/3770663/wb-bnm-2022-report.pdf

The report also provided recommendations for policymakers and relevant authorities to better understand and address nature-related financial risks within existing climate change policies or strategies (Table 1).

Table 1: Possible actions to address challenges of nature-related financial risks

	Less Intensive	⟷	*More Intensive*
Awareness & Policy Discourse			
Raising awareness on nature-related financial risks	Share World Bank and BNM report findings (Diagram 5) to key stakeholders (government, financial institutions) Contribute to awareness-raising programs on nature-related financial risks	Advocate and/or collaborate with government to include considerations of nature-related financial risks in policies & investments	Support the government in developing a cohesive national strategy to address nature-related risks
Capacity Building			
Enhancing capacity building of relevant stakeholders	JC3 to include nature-related financial risks in its capacity building and stakeholder engagements Collaborate with experts to deepen knowledge and develop tools for nature-related financial risks	Support development of incentives and financial instruments to protect biodiversity and ecosystem services	Expand existing government grants/funds related to climate change to include protection of biodiversity and ecosystem services
Enhancing macroeconomic surveillance capacity and risk identification	Enhance technical capacity in risk transmission i.e., interactions between climate- and nature-related risks Imbue common factors of climate- and nature-related financial risks in surveillance framework	Improve data on nature-related risks at a granular level (leveraging on JC3's ongoing initiative)	Embed nature-related financial risks in high-level reference scenarios for stress testing Supervisory deep-dives at banks with substantial financing in (future) protected areas
Policy Adoption			
Developing regulatory and supervisory requirements for supervised institutions	Enhance existing guidance on nature-related risks in taxonomies and frameworks	Set expectations to understand the most relevant nature-related financial risks Embed nature-related financial risks in climate-related guidance (governance, disclosure, risk management)	Communicate expectation to manage and disclose nature-related financial risks together with climate-related risks Develop monitoring system for new credits to be compliant with climate- and nature-related regulations

Source: Bank Negara Malaysia

Future Work

Financial industries around the world are just starting to pay attention to the issue of biodiversity loss and nature-related financial risks. A similar situation is also observed in Malaysia. This is mainly due to low awareness and understanding of how climate and nature are connected. The potential impact of risks associated with climate change and nature to the financial sector, economy, and society as a whole is also not well-appreciated or understood. As the financial industry begins to deal with risks from climate change, it is also necessary for the sector to start building knowledge on nature-related financial risks. These risks are closely related. So, approaches and strategies taken to manage climate-related risks can be used with some adjustments to begin to also deal with risks arising from biodiversity loss. Where relevant, nature-related financial risk considerations should be integrated into current practices, policies, and frameworks for climate risk management. Financial institutions should also consider educating their clients on nature-related risks and the impact on them. The development of nature-based solutions[6] also creates new financing prospects for financial institutions that will bring about positive values to the environment and society.

While they are considerably more complex to deal with, the impact of nature-related risks is likely to be more significant than climate-related risks. Current strategies to respond to climate-related risks can serve as important building blocks for financial institutions to consider nature-related financial risks in their strategies and actions. To this end, the Bank plans to extend current engagements and capacity building initiatives within the Bank and financial sector to the consideration of nature-related risks. The immediate focus is to identify opportunities to build on ongoing efforts to strengthen climate resilience. For example, the JC3 sub-committee on Bridging Data Gaps (BDG)[7] is already exploring ways to improve collection of data relevant to nature-related risks in Malaysia. This aims to facilitate more granular analysis on how the financial sector drives nature-related risks and on the flip side, the impact of biodiversity loss to the financial system, to serve as a basis for prioritising the industry's response to nature-related risks.

[6] Nature-based solutions are actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal, and marine ecosystems while simultaneously generating environmental, social, and economic benefits, and building resilience (United Nations Environment Programme).

[7] The BDG had, on 16 December 2022, published a data catalogue as a source of reference on climate and environmental data for the financial sector. For more information, visit https://www.bnm.gov.my/-/jc3-climate-data-catalog

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Risk Management and Internal Controls

In fulfilling its statutory mandates, the Bank is exposed to a broad range of risks in carrying out its responsibilities and daily operational activities. The Bank manages these risks through an Enterprise Risk Management Framework. The framework provides a comprehensive approach to identify, assess, monitor, and mitigate these risks (Diagram 1). The framework also establishes the oversight, control and discipline needed to drive continuous improvements in the Bank's risk management capabilities and risk culture.

The Bank implements a risk governance structure that reflects a shared responsibility for managing risks between line departments, independent risk management and control functions, and internal audit (Diagram 2).

The Bank's Board, supported by the Board Risk Committee (BRC), oversees the Bank's risk management frameworks and practices. The Board also sets the 'tone from the top' in promoting the desired risk culture across the Bank.

The accountability for implementing sound risk management frameworks and practices across the Bank rests with the Bank's Senior Management. This is operationalised through the Risk Management Committee (RMC) and Reserve Management Committee (ReMC). These committees meet regularly to deliberate the latest strategic and critical risks faced by the Bank, including reputational risk. In turn, the RMC is supported by the Financial Risk Management Committee (FRMC), Operational Risk Management Committee (ORMC) and Crisis Management Team (CMT).

The FRMC and ORMC are responsible for the management of financial and operational risks, respectively. Meanwhile, the CMT provides oversight on the Bank's Business Continuity Management by ensuring crisis preparedness. The CMT also coordinates the Bank's response to operational disruptions.

In formulating and implementing policies under its financial and monetary stability mandates, the Bank is guided by its Policy Development Framework and has in place a well-defined governance process for approving policies. Policy proposals are subjected to cross-functional deliberations within the Bank, as well as external consultation and transparency frameworks. The Bank has several high-level committees that preside over policy making. These include the Management Committee, the Monetary Policy Committee, the Financial Stability Committee and the Financial Stability Executive Committee. Chaired by the Governor, these committees are primarily responsible for approving policies issued and implemented by the Bank to promote financial and monetary stability.

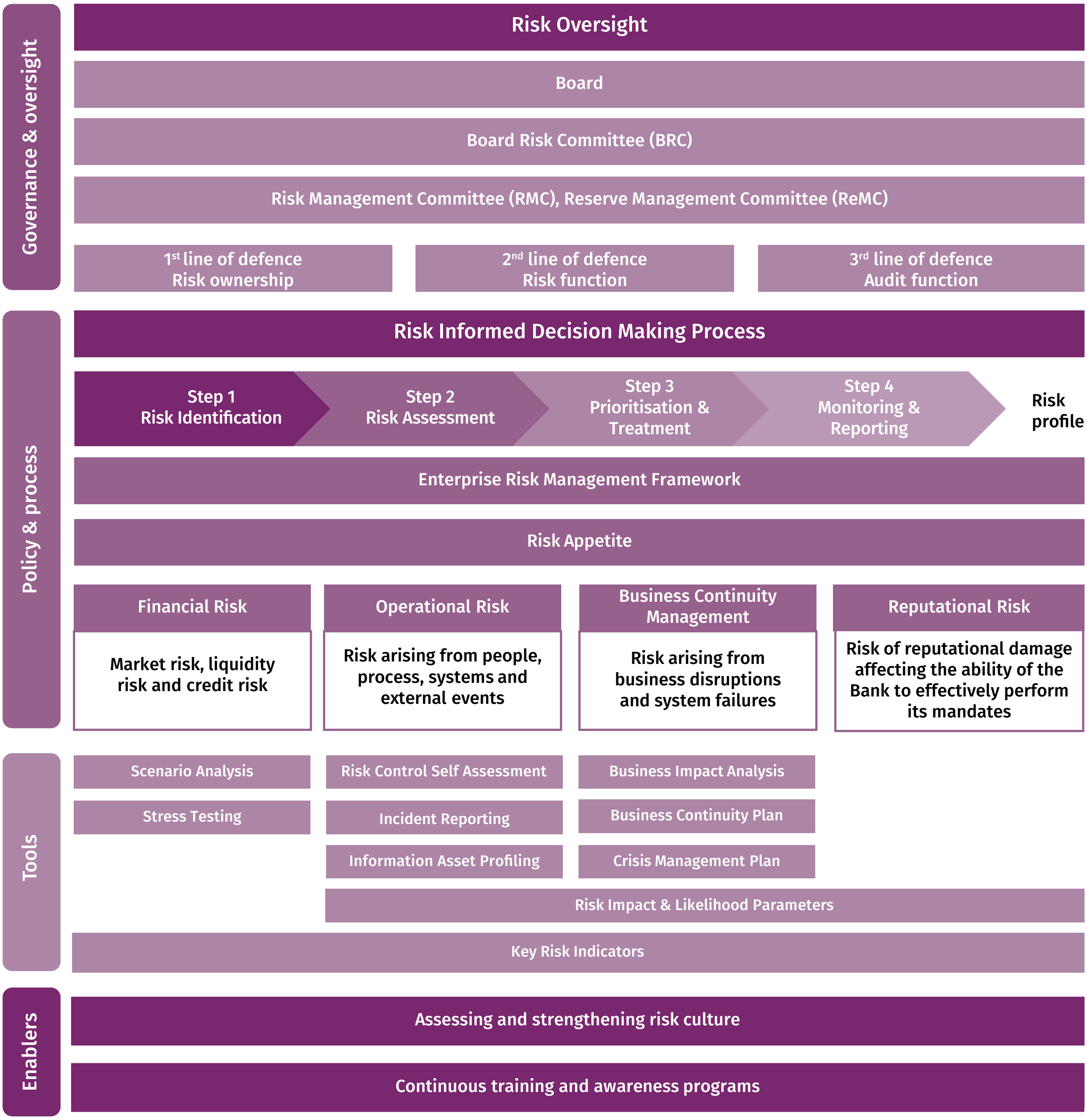
To support effective risk governance, the Bank adopts the 'three lines of defence' model (Diagram 3):

- Business units as the 'first line' of defence are responsible for evaluating their risk environment, establishing controls and ensuring that these controls are implemented effectively.
- The 'second line' function carried out by the Risk Management Department and Treasury Risk Management Section within the Investment Operations and Financial Market Department, facilitates sound risk management practices by business units through appropriate frameworks, policies and tools. The Risk Management Department also supports Senior Management and the Board in monitoring risk developments and issues at an enterprise level.

- The ‘third line’ of defence – the Internal Audit Department, provides independent assurance of the effectiveness of risk management policies and measures.

The Bank’s enterprise risk appetite statements guide the Bank’s management of its risks. The statements specify the level and types of risk that the Bank is willing to accept, to achieve its business objectives. The risk appetite statements were refreshed in 2022 to ensure that they remain relevant in light of the changing risk landscape (Diagram 4). The refreshed risk appetite statements provide greater clarity around the boundaries for risk events that the Bank does not tolerate, such as fraud and unethical conduct. The statements also acknowledge that

Diagram 1: The Bank’s Enterprise Risk Management Framework



Source: Bank Negara Malaysia

there are risks that would be difficult or undesirable to eliminate completely. For example, the costs involved to operate at zero risk could be prohibitive. Tolerance for some level of risk is also necessary to encourage innovation and operational efficiency. As such, the refreshed statements provide flexibility for the Bank to take on measured risks in some areas, with these risks managed through appropriate safeguards. The refreshed risk appetite statements are being embedded into the Bank's processes and culture, to promote consistent, risk informed decision-making aligned with the Bank's strategic goals.

Diagram 2: Risk Management Governance Structure

Board of Directors

Board Risk Committee*

Reserve Management Committee**

- Responsible for risks and investment strategies in the management of the Bank's international reserves
- Reviews risks emanating from the global economic and financial markets outlook, and the implications for the Bank's investment strategies and financial positions

Risk Management Committee**

- Responsible for the overall management of risks faced by the Bank
- Ensures the strategic and critical risks are appropriately addressed

Operational Risk Management Committee***

- Provides oversight on the management of operational risks faced by the Bank and ensures that the risks are adequately managed

Financial Risk Management Committee***

- Provides oversight on the management of financial risks faced by the Bank and ensures that the risks are adequately managed

Crisis Management Team***

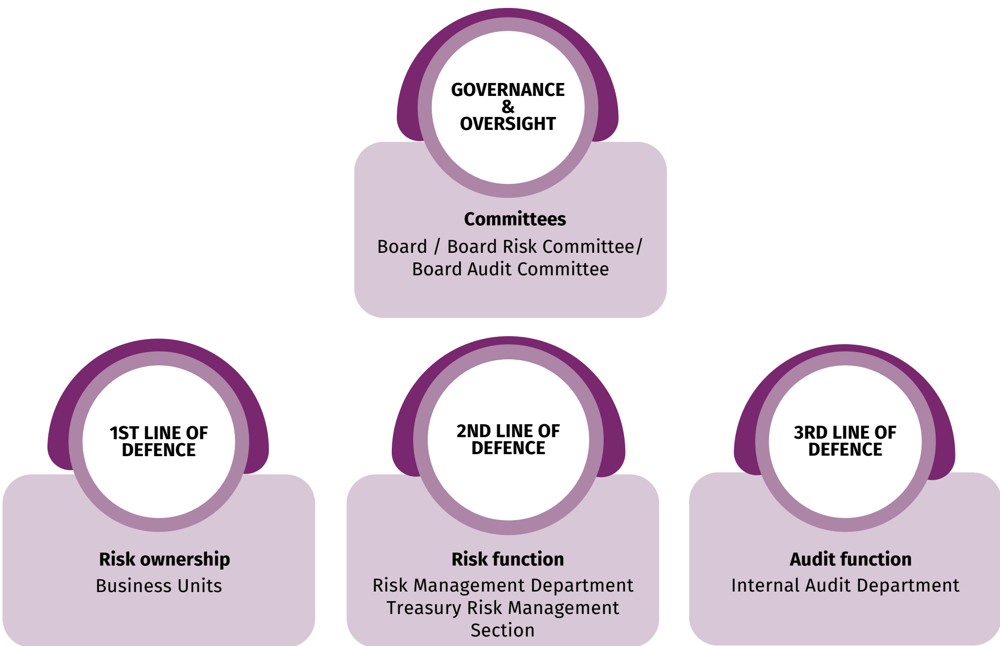
- Provides oversight on the Bank's Business Continuity Management
- Ensures crisis preparedness
- Coordinates the Bank's response to operational disruptions

* Chaired by an Independent Non-Executive Director of the Bank
** Chaired by Governor
*** Chaired by Deputy Governor

Source: Bank Negara Malaysia

Diagram 3: Three Lines of Defence Model

THREE LINES OF DEFENCE MODEL



Source: Bank Negara Malaysia

Diagram 4: Bank Negara Malaysia's Risk Appetite Statements

ENTERPRISE RISK APPETITE STATEMENT

The Bank is committed to excellence in promoting monetary and financial system stability and fostering a sound and progressive financial sector, to achieve sustained economic growth for the nation. In pursuing the mandates, the Bank faces risks arising from domestic and external environment, nature related changes, crisis events, proliferation of global digitalisation and more sophisticated cyber-attacks. The Bank also faces greater expectations from stakeholders demanding higher standards of transparency and engagement.

REPUTATIONAL

In fulfilling its mandates as entrusted under the law, the Bank is committed to uphold its high standards of integrity, accountability and professionalism, and maintain public confidence and trust.

OPERATIONAL

The Bank does not tolerate operational failures that can undermine the confidence in the Bank's ability in carrying out its functions or cause systemic disruptions in the functioning of the financial system and markets for which the Bank is primarily responsible. The Bank accepts some risks for non-critical business areas to ensure efficiency and promote innovation within the Bank. However, these risks will be managed prudently.

FINANCIAL

The Bank's financial risk exposure arises mainly from the holding and management of international reserves. It manages these risks carefully and ensure financial sustainability, but not at the expense of its mandate. The Bank will ensure prudent financial management and seek to maintain strong financial buffer to respond to severe shocks.

These risks are managed through the effective implementation of internal frameworks, policies and processes, a sustained focus on a strong risk culture and a competent and professional workforce.

Source: Bank Negara Malaysia

Managing the Bank's key organisational risks

To manage financial risk, the Bank monitors market, liquidity, and credit risk exposures, via risk limits and controls. The Bank's international reserves portfolio investments are driven by a Board-approved investment benchmark that sets the appetite for long-term risk and returns. Any deviation from the benchmark is controlled using risk limits, investment guidelines and designated approving authorities. During the year, the Bank revised its investment benchmark for international reserves. The benchmark is reviewed every three to five years to reflect significant changes in the global investment landscape. In the area of credit risk, the Bank maintains a stringent credit policy to ensure credit exposures undertaken through the Bank's investment activities remain within acceptable levels.

In managing non-treasury financial risks, controls are also in place to ensure that the Bank allocates its expenditures and manages its finances prudently. These include policies and procedures for procurements and payments, as well as a robust budgeting and management accounting process that involves careful planning, forecasting and analysis. The budget is also monitored and adjusted on an on-going basis as new information becomes available. This is accompanied by regular reporting to management. On the procurement front, effort has been put into strengthening the governance and efficiency of the Bank's procurement processes. This includes the establishment of a Centralised Procurement Department.

To manage operational risks, the Bank identifies and proactively monitors risks through key risk indicators. These risks include, but are not limited to, information technology, cybersecurity, people, legal, business disruption, and physical security risk. The management of these risks is supported by departments designated as Risk Policy Owners (RPO). RPOs are responsible for the identification, monitoring and reporting of relevant transversal risks – risks that cut across the Bank. RPOs also propose Bank-wide controls and action plans to manage the relevant transversal risks.

On the technology front, the adoption of new systems such as cloud services has facilitated more effective remote and hybrid working arrangements. At the same time, it has also meant that the Bank needs to actively manage increasingly dynamic and varied technology and cyber risks. Thus, emphasis is placed on strengthening the resilience of the Bank's defences against cyber-attacks. This includes instituting stronger technology governance and architecture, improving network resilience and conducting regular cyber monitoring. The Bank also has in place a Cybersecurity Management

Assessment Program (CMAP) to assess and improve the level of the Bank's cyber security maturity. Mandatory training sessions were also conducted throughout the year to help staff stay ahead of cyber threats.

In addition, the Bank has deployed several key measures to safeguard its information assets. This includes the use of technology to detect and prevent information leakages. To inculcate continuous awareness among staff on the Bank's information security policies and measures, the Bank has introduced mandatory attestations by staff on information security management.

Recognising expectations for us to communicate and explain our policies, we have intensified our policy communications and education through tailored engagements. We have also been actively sharing content for public consumption in different formats and across more channels to better engage the general public. For example, we have developed infographics such as the 'Monetary Policy Statement snapshots' and 'BNM Explains'. The infographics are disseminated via the Bank's social media platform to help explain our policy decisions. These initiatives are aimed at helping the Bank close expectation gaps and manage reputational risk in the course of discharging its mandates.[1]

Business Continuity Management

The Bank aims to maintain robust business continuity arrangements. This ensures that core business processes are resilient to a broad range of disruptive event scenarios such as pandemics, cyber-attacks, natural disasters and civil unrest.

During the year, the Bank continued to adapt its relevant risk management procedures and controls to facilitate a safe return to office. This includes implementing stricter COVID-19 testing and isolation requirements on staff performing critical business functions. These measures were aimed at minimising operational disruptions.

The Bank also refreshed its business impact analysis by incorporating new risk event scenarios such as floods and cyber-attacks. Regular crisis simulation exercises, including cyber drills, were also conducted to ensure that the Bank's business continuity plans remain responsive and effective.

Despite the challenges presented by uncertainties in the global risk landscape, continuous strengthening of our risk management capabilities has helped us fulfil our statutory mandates. It has also helped us maintain a risk profile throughout the year that continues to be resilient against material risk events.

Internal Audit

The Board Audit Committee (BAC) provides oversight over the effectiveness of the Bank's internal controls and compliance with legal and regulatory requirements. In discharging this role, the BAC is supported by the Internal Audit Department (IAD).

The IAD provides independent assurance on the adequacy and effectiveness of the Bank's governance and risk controls. The IAD also submits an independent quarterly report to the Minister of Finance on the Bank's international reserve management which provides an assessment on whether international reserves have been managed according to policies and guidelines approved by the Board.

Audit priorities in 2022 were aligned with key organisational risks and the Bank's strategic outcomes for the year, which includes assessments on emerging risks and vulnerabilities (Diagram 5). In setting out these priorities each year, the IAD also draws on the input and assessments of the Risk Management Department.

As part of its advisory function, IAD actively promotes higher risk awareness and sound control practices amongst staff. This is done by providing audit insights and recommendations to further enhance the Bank's control environment.

Increased use of data analytics has enabled more efficient and timely risk identification and in-depth audit assessments. IT capabilities have also been upgraded to enable more effective use of analytic dashboards to support audit practices.

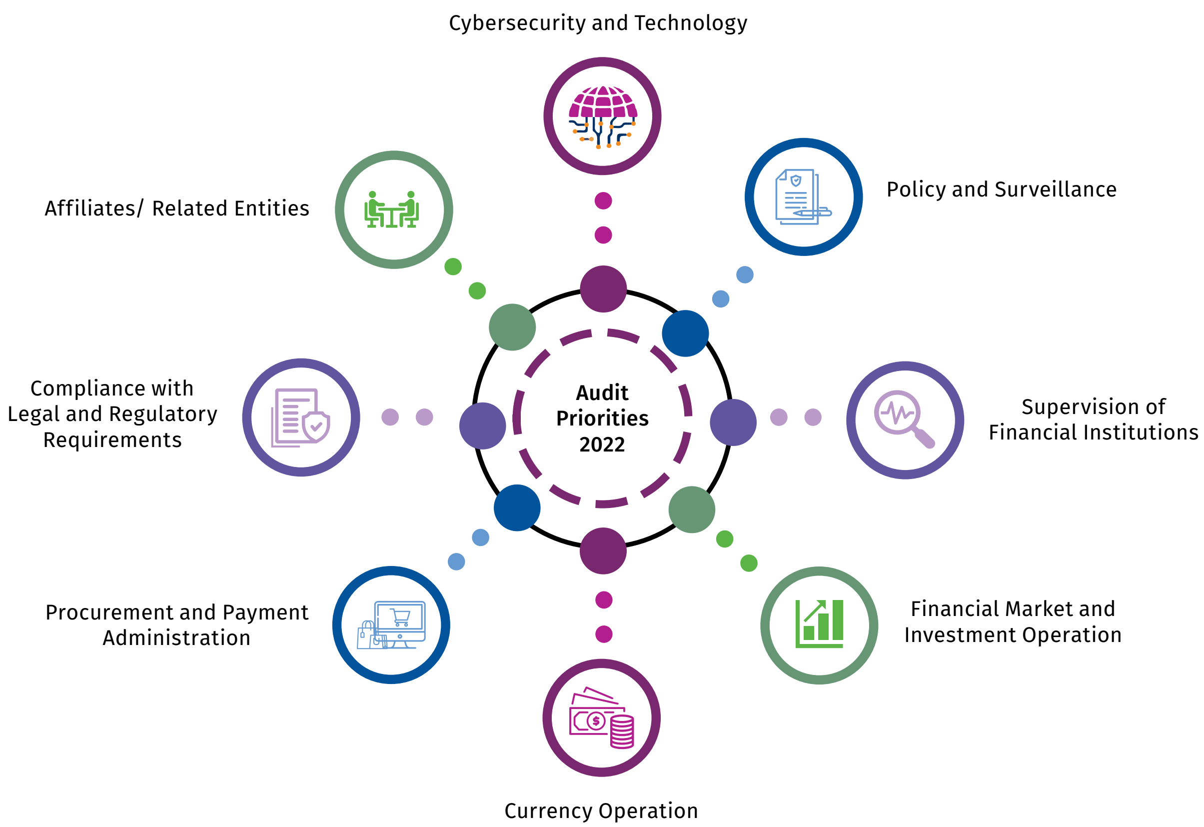
An independent assessment benchmarked against international standards was carried out by the

[1] More information on the Bank's public engagements throughout the year can be found in the 'Engaging Malaysians' chapter of this report.

Institute of Internal Auditors Malaysia in 2022. The evaluation concluded that IAD is operating as a matured and capable audit function. This implies that policies, processes and procedures needed to facilitate an effective internal audit function are in place. Hence, enabling IAD to play a critical role towards the achievement of strategic objectives.

In keeping pace with expectations to strengthen the Bank's control environment, IAD will continue to preserve its agility in response to key organisational and emerging risks. Initiatives to elevate audit competencies will also continue to be prioritised to support sound audit assessments in an increasingly complex operating environment.

Diagram 5: Focus & Coverage of Audits Conducted in 2022



Source: Bank Negara Malaysia

Engaging Malaysians

Our policies and actions affect individuals and businesses in Malaysia. We adapted our communications for the public to understand our mandates and role.

Introduction

With the transition to endemicity in 2022, we re-introduced in-person engagements after having most of our interactions done virtually during the COVID-19 pandemic period. Throughout the year, there were increased interests on various issues related to the economy, financial sector and other matters under our purview. Not only did we engage more, we also further diversified our content and the channels used to reach a wider range of audiences. Our goal was to explain more and to explain more simply.

Explaining the Economy

2022 was an eventful year for the Malaysian economy. We spent a large part of our time explaining economic developments and our policy responses. Our senior management gave interviews to several media outlets with wide readership and listenership bases. This was complemented by frequent engagements with the media, in particular before the release of our major publications. We conducted two media workshops for journalists to deepen their understanding of important economic concepts, emerging issues and to address queries of public interest.

On the digital front, we introduced several new outputs to enhance public understanding on our key policy areas. For monetary policy, we introduced snapshots of our Monetary Policy Statements and responses to Frequently Asked Questions on our website. We also started a new series called 'BNM Explains' on our social media platforms to better address trending queries, correct misconceptions, and reinforce our intended messages.

Financial market players are also an important audience. In 2022, we conducted seven bilateral engagements with international and local fund managers. We also conducted six engagements with economic and banking analysts to share our assessment on the economy and financial sector.

Fighting Financial Scams

Financial scams have been on the rise since the pandemic. We increased collaboration with other Ministries, regulators, law enforcement agencies and industry players to address this issue more effectively. In conjunction with the launch of the Financial Crimes Exhibition in September 2022, we announced five additional measures that the banks are required to undertake to better protect consumers from scams. These efforts were further complemented with the establishment of the National Scam Response Centre (NSRC) in October 2022. Further reading on NSRC can be found in Chapter 1.7: Maintaining Financial Integrity.

We also increased our efforts to improve financial scam awareness and empower individuals to better protect themselves. *Amaran Scam Facebook* continues to be our focal point for scams-related matters on social media. Our followers have increased by 20,000 to 60,000 followers by the end of 2022. We continued with our regular weekly scam awareness postings ("Amaran Scam") on our social media but with some notable changes, including more short-form videos for more effective audience engagement. For example, we created "Kak Pah", embodying your-next-door-neighbour persona who fronts most of our scam awareness messages. Our data shows that video-based content performed better compared to our static-design public service announcements.

Periodic media engagements to improve understanding of technical concepts and to address queries of public interest

Regular bilateral meetings with analysts and fund managers to exchange insights

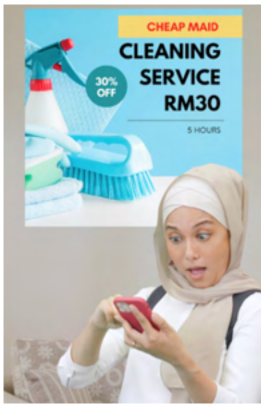
Exclusive interviews by our senior management to explain economic issues to the general public

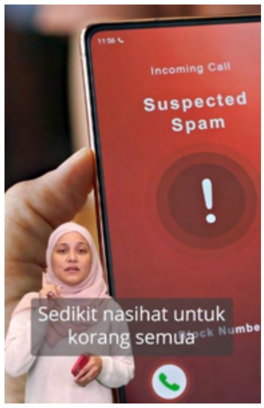
New outputs to enhance public understanding on the Overnight Policy Rate

Governor Shamsiah and the Inspector-General of Police at the virtual launch of the "Financial Crime: Scan Before You're Scammed exhibition"

The fight to combat financial scams is a joint responsibility between the public sector, industry and the public. The NSRC is a joint effort between the National Anti-Financial Crime Centre (NFCC), Polis Diraja Malaysia (PDRM), the Malaysian Communications and Multimedia Commission (MCMC) and Bank Negara Malaysia, together with the banking and telecommunication industries to share relevant resources and information to take quicker action on online financial scams and prevent further financial losses

One of our 'Kak Pah' scam awareness posts on APK malware app scam recorded a reach of close to 5% of the Malaysian population. We also increased our messaging to focus on the latest modus operandi employed by scammers in hopes to better deter these ever-evolving threats. To broaden our reach, we published our scam awareness messages and conducted webinars in other vernacular languages such as Mandarin and Tamil.





The launch of the banking industry's National Scam Awareness Campaign in October 2022

We introduced a "Kak Pah" persona to make our scam alerts more relatable

Amaran Scam postings every Friday

Increased outputs in vernacular languages to reach a wider audience on issues of high public interest

Effective financial scam responses require a 'whole-of-nation approach'. Following this, the financial industry launched its National Scam Awareness Campaign in September. We also incorporated cybersecurity educational elements in our e-Duit awareness campaign launch during the Financial Literacy Month Exhibition to encourage the public to adopt e-payments, and to do so safely.

Enhancing Financial Literacy

As part of the Financial Education Network (FEN), we hold regular engagements with wide-ranging stakeholders to raise awareness and promote conversations on financial literacy.

The Financial Capability and Inclusion Demand Side (FCI) Survey 2021[1] found improvements in Malaysians' financial literacy rates from 2018. Although the result showed significant improvements in financial knowledge, the survey also revealed complex layers to respondents' financial attitudes and behaviours such as significant shift in the adoption of digital financial products and services. However, further assessment during the focus group discussions and a supplementary survey revealed that Malaysians have relatively low levels of digital financial literacy. For example, 37% of Malaysians surveyed share passwords and/or PIN of bank accounts with close friends[2]. These insights have informed FEN on their engagement approach to help individuals adapt to these changes. Consequently, we shifted our focus towards promoting digital financial literacy to enhance Malaysians' ability to use digital financial services safely and confidently.

One of FEN's signature events is the Financial Literacy Month (FLM) which is held annually in October. FLM2022 reached more than an estimated 3.2 million[3] people through exhibitions, workshops, and webinars across various communities. (See Diagram 1).

Guided by the results of the FCI Survey 2021, one of our initiatives during FLM2022 was a nationwide campaign to address low levels of digital financial literacy. Together with our FEN partners, we deployed a mobile coach that travelled to 61 locations (See Diagram 2) across the country to conduct a nationwide roadshow and directly engaged with more than 20,000 people. As part of this roadshow, we undertook a digital financial literacy survey involving 5,000 respondents from various life stages. Key insights are summarised in Diagram 3.

The roadshow ended with the FLM2022 Exhibition, which was held on 29-30 October 2022. The exhibition which showcased the safe usage and benefits of digital financial services as part of the e-Duit initiatives was well-attended. The visitors gained a better understanding of the advantages of digital financial services and enhanced their digital financial literacy. The e-Duit initiative is further elaborated in Chapter 1.5: Promoting Safe and Efficient Payment and Remittance Services.

[1] The FCI Survey 2021 results were published in the Financial Stability Review First Half 2022
[2] Source: FCI Survey 2021
[3] Refers to interactions through webinars, competitions, financial education talks, quizzes, radio and TV programs, newspaper articles, virtual exhibitions and social media outreach

Diagram 1: Key Financial Education Initiatives and Engagements during FLM2022

1 ROADSHOW & EXHIBITIONS

- FLM2022 Roadshow, covering 61 locations including 13 universities, school and government office: 1 – 28 October 2022
- FLM2022 Exhibition (hybrid): 29 – 30 October 2022
- InvestSmart Fest 2022 (hybrid): 14 – 16 October 2022

>284K Reached

2 FORUM, SEMINARS & WEBINARS

- Forum Perdana Ehwal Islam – "Terang Dalam Gelap"
- Webinar series by financial industry – "Semak Sebelum di Scam"
- Financial management seminars/webinars conducted by FEN members and partners

>838K Reached

3 SYMPOSIUM, RESEARCH & SURVEYS

- FEN National Financial Literacy Symposium (NFLS)
- 2nd FEN Community of Practice (COP)
- Financial literacy surveys by Employees Provident Fund (EPF), Ministry of Higher Education and RinggitPlus

>36K Participated

4 OTHER PROGRAMMES

- Radio interviews on "Penipuan dalam Talian"
- "Khutbah Jumaat"

>42K Reached

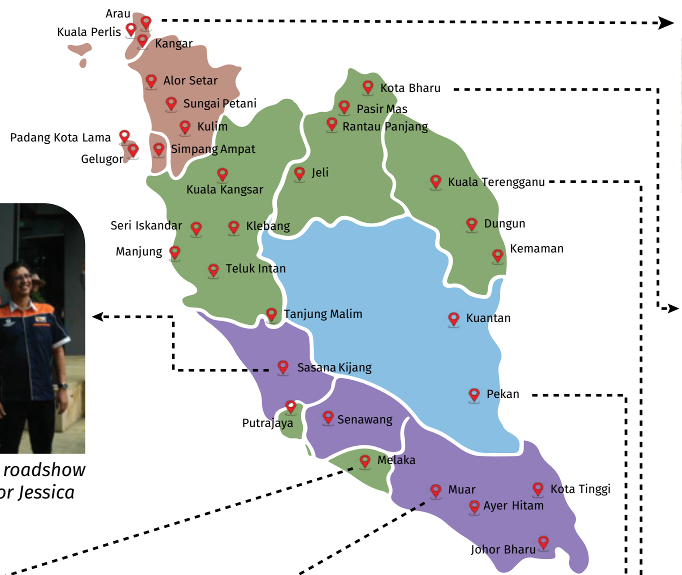
5 SOCIAL MEDIA PLATFORMS

Facebook and Instagram

>2M Reached

Source: Financial Education Network

Diagram 2: FLM2022 Nationwide Roadshow at 61 Locations



Financial education talk at Universiti Malaysia Perlis, Arau

FLM2022 launch and nationwide roadshow flag-off event by Deputy Governor Jessica Chew on 1 October 2022

Public engagement at Pasar Besar Siti Khadijah, Kota Bharu

e-Duit campaign at Kolej Profesional MARA Bandar Melaka, Melaka

Financial education forum at Maktab Teknik Polis Diraja Malaysia, Muar

Financial education talk at SMA Tengku Ampuan Fatimah, Pekan

Public engagement at Dataran Pantai Batu Burok, Kuala Terengganu

Source: Financial Education Network

Diagram 3: Key Insights from FLM2022 Nationwide Roadshow

Financial education talks

Participants' **knowledge on financial education topics** including scams and personal financial management **improved by 22%***

Mule accounts

Many especially youths have no knowledge of **mule accounts** and its consequences

i. **33% do not know of actions** that will lead them to become a mule
ii. **Most youths** presented with 'Mule Account' scenarios find the **scheme to be attractive as a means for quick money**
iii. Do not feel it is a scam as there is no loss of money
iv. **Unaware that being a mule** is an **offence**

Cyber hygiene

Awareness on **cyber hygiene**:

i. **Majority** engaged were **not aware of security features** of payment platforms
ii. 29% **share passwords** with family members and close friends

* Based on pre and post survey on the knowledge gained amongst the participants during the financial education talks held throughout FLM2022

Source: Financial Education Network

We also worked with *Perbadanan Insurans Deposit Malaysia* and the Malaysian Economic Association (MEA) to organise the first annual National Financial Literacy Symposium (NFLS). The NFLS brought together the academic community, policymakers, and industry practitioners to showcase and raise the visibility of multidisciplinary research on financial literacy in Malaysia. The NFLS received 62 research abstract submissions from researchers from Malaysia and abroad. Eleven of the papers presented will be published in MEA's academic journal in the third quarter of 2023.

We also maintained active engagements in the rural areas. This included communities in Pulau Redang and in other areas through mobile banks and during the FLM. These engagements were mostly focused on raising awareness on digital financial literacy as well as affordable insurance and takaful protection via Perlindungan Tenang products.

In 2022, through FEN's Facebook and Instagram accounts, we featured more than 200 content postings on financial literacy and financial education, with an estimated reach to over 8.5 million users[4]. In addition, FEN's website offered a range of financial education resources and tools, which were accessed by more than an estimated 55,000 users[5].

Promoting Financial Sector Development

At the start of the year, we launched the Financial Sector Blueprint 2022-2026 during our second MyFintech Week (MyFW). This blueprint sets out our development priorities for the financial sector over the next five years. Given the caution surrounding COVID-19 then, MyFW was held virtually. That said, this virtual set up allowed us to reach a wider range of speakers and audience (more than 4,000 participants), both domestically and abroad. For more details, please refer to Chapter 1.3: Promoting a Progressive and Inclusive Financial System.

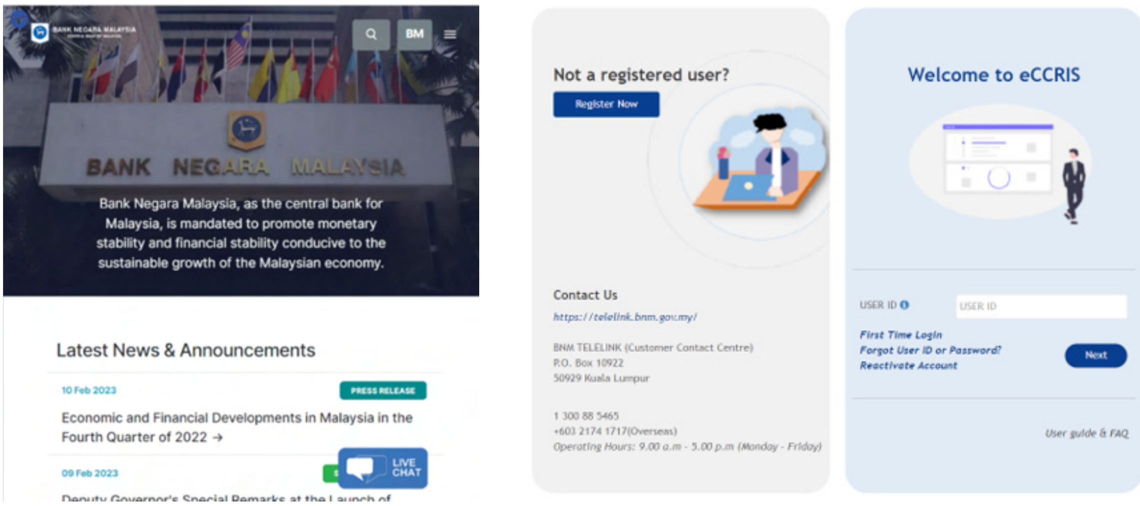
In October 2022, we co-organised the Global Islamic Finance Forum 2022 in partnership with the Association of Islamic Banking and Financial Institutions Malaysia. This biennial event generated an active discourse on the work required to realise the full potential of Islamic Finance. To further recognise individuals who have contributed significantly to the growth of Islamic Finance, we – together with the Securities Commission Malaysia – resumed the conferment of the Royal Award for Islamic Finance (RAIF) that was deferred in 2020 due to the pandemic.

[4] Estimated based on the number of users who have come across a particular content on FEN's social platforms (FEN Facebook and Instagram) from 1 January – 31 December 2022
[5] Estimated number based on the FEN website's Google Analytics from the establishment of FEN website on 1 October 2021 until 31 December 2022

The RAIF 2022 award was bestowed by His Majesty the Yang di-Pertuan Agong to Tan Sri Dr. Mohd Daud Bakar for his contributions to the development of the global Islamic finance industry, particularly in developing the first Shariah standard on gold issued by the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI)

Investing in Digital

Despite resuming physical engagements, we see much upside to continue investing in digital channels as a strong complement to our physical outreach. We introduced several improvements to our website in 2022. To improve public convenience, we introduced a "Live Chat" widget that allows our customer representatives to attend to more queries at a given time. This shortens waiting times for the public. In the same spirit, we also introduced online registration for new users of our Central Credit Reference Information System (CCRIS). Prior to this, new users could only register in-person. We also introduced a new landing page for key information themes that would be of high relevance for financial consumers. This helps improve user experience by enabling easier accessibility to high-traffic webpages such as our Financial Consumer Alert and updates on our enforcement actions.



The Live Chat widget and eCCRIS online registration improve public accessibility to key services and information

In addition, we continued to invest in our social media presence. Our social media content is anchored by six signature monthly series. On top of our ‘BNM Explains’ and ‘Amaran Scam’ series, our ‘Did You Know?’ series focuses on providing bite-sized fun facts on our work and policies. The ‘Financial Bites’ series aims to provide simple and relatable financial advisory to the public, which we typically post closer to payday as a teachable financial literacy moment. We also take snippets of speeches by our senior management and feature it on our 'Quote Series‘. The ‘Time Travel’ series helps inform the general public of our history by evoking a sense of nostalgia among our followers.

Beyond content, we also invested in diversifying the format of our delivery. We spent more effort to produce both short- and longer-form video content given that platforms are increasingly prioritising this format. Where suitable, we showcased our staff more prominently, especially in our recruitment or public awareness posts.

Besides the metrics of follower growth and impressions, we paid close attention to engagement rates to gauge our social media performance. In 2022, our social media platforms recorded an average follower growth of 25% (Diagram 4), with LinkedIn being our fastest growing platform. Compared to other central banks on a per capita basis, our Facebook, LinkedIn and Instagram are within the ten most followed accounts. Similarly among ministries and public agencies locally, our LinkedIn, Twitter, and Facebook also ranked within five most followed accounts. Our platforms recorded an average engagement rate of 5.4%[6].

Imbas Kembali

Siri Petikan

Tahukah Anda

Bijak Kewangan

Amaran Scam

BNM Kongsi

Our social media postings are anchored by these six signature series

[6] Engagement rate measures the amount of interaction on a post against the total number of people who see it. Engagement rate above 3% is considered high

Diagram 4: Growth in Social Media Followers on BNM Official Platforms

The size of follower base on BNM official social media platforms grew by an average of 25% in 2022

Facebook	Twitter	LinkedIn
299K (+7%)	309K (+4%)	216K (+45%)

Instagram	YouTube	Telegram
27K (+33%)	6K (+15%)	3K (+44%)

Source: BNM's Social Media Analytics

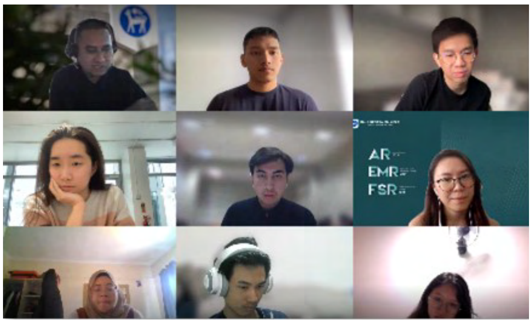
We produced more short- and long-form video content

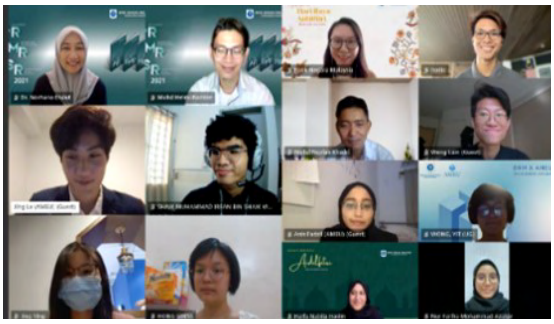
Engaging Youths

In 2022, we actively engaged youths with the intent of increasing their understanding on our work and the reasoning for our policies. To this end, we engaged six youth groups with differing focus areas. Over the course of the year, we engaged around 700 youths on topics ranging from the economy, sustainability, Central Bank Digital Currency, and digitalisation. Across these engagements, we received an average Net Promoter Score (NPS) of 70[7]. We also saw improved understanding on the topics discussed based on our surveys done before and after the presentation.

Engagement with youths on financial literacy also took place throughout the year. We targeted those who are currently attending higher learning institutions and those not in education, employment, or training. Financial education programmes were conducted for youths in the Malaysian Short-Term Employment (MySTEP) Programme and graduates of Projek Belia Mahir. To raise awareness on insurance and takaful protection among university students and trainee teachers, we launched the #MyDuitStory2 Short Video Competition. It garnered 1.5 million impressions via the MyDuitStory Facebook page.

[7] NPS is a widely used metric based on a single survey question asking respondents to rate the likelihood of recommending a product or service to others. Anything over 50 is considered a good NPS. 70 or higher is considered excellent





In addition to youth engagements on financial literacy, we also increased engagements on our work and policies

Combining the Best of Both Worlds

Our Bank Negara Malaysia Museum and Art Gallery (BNM MAG) accelerated its public outreach efforts with physical flagship exhibitions and programmes such as Financial LATeracy in Sabah and International Museum Day in Kelantan, as well as the Children's Festival @ BNM MAG and Art Bazaar. We saw an increase in physical visits in the second half of the year as we fully re-opened to walk-in visitors in July. In 2022, we recorded 127,779 physical visits that was 16.7% more than visits in 2019 before the pandemic. Nevertheless, given receptiveness to our virtual exhibitions and programmes, BNM MAG will continue to provide hybrid learning experiences and programmes to the general public. This will accord us greater flexibility in customising our outreach to better educate the public on our roles and mandates.

Diagram 5: List of Exhibitions and Activities in 2022

Financial LATeracy in Sabah (physical travelling exhibition)

- The exhibition featured distinctive caricatures by Datuk Lat from 1999 to 2012.
- It is inspired by the **Buku Wang Saku** series that was published by the Bank to inculcate prudent money management from an early age.
- Launched by Yang di-Pertua Negeri Sabah Tuan Yang Terutama Tun Datuk Seri Panglima (Dr.) Haji Juhar bin Datuk Haji Mahiruddin on 12 October 2022 at the **Sabah State Museum.**

Bingkas Berdiri: Naratif Seni COVID-19 (virtual exhibition)

- An **artistic interpretation of COVID-19** after two years of the pandemic.
- This exhibition reflects the artists' own experiences as well as observations of the lives of those surrounding them during the pandemic era - a historic chapter in the 21st century.

Link: Bingkas Berdiri: Naratif Seni COVID-19 (bnm.gov.my)

International Museum Day 2022 in Kelantan (physical exhibition)

- BNM MAG emerged champion for **'The Most Creative Exhibition Booth'** at the national level.
- BNM MAG's exhibition booth themed 'The Remarkable Currencies: Evolution of Coins and History of Kelantanese Currencies', reached nearly 10,000 locals, tourists, and rural communities through engagements, outreach initiatives and education programmes.
- BNM MAG collaborated with Agensi Kaunseling dan Pengurusan Kredit (AKPK) and Universiti Malaysia Kelantan (UMK) Bachok on activities during the day. This includes talks on currency education and financial crime, personal financial management counselling, and an awareness drive for e-CCRIS registrations.

Children's Festival @ BNM MAG 2022 (physical event)

- Themed **"Sikit-sikit Lama-lama Jadi Bukit"**, the Festival included 32 programmes and activities[8] with the aim to inculcate the **importance of money management and currency education among children** in conjunction with the World's Children's Day. The festival recorded 2,348 participants.
- BNM MAG also successfully organised a 'Saving-Box Making Event'. A total of 560 students from 48 schools (including students from Pendidikan Khas school), teachers and members of the general public participated in the event.
- **BNM MAG entered the Malaysia Book of Records for organising the "Most Participants in a Saving-Box Making Event".**

Art Bazaar 2022 (physical)

- The event aimed to **promote emerging homegrown talents** by showcasing their artworks. 17 emerging artists participated in the event.
- To promote art appreciation and affordability, all items were priced at RM2,500 and below.

[8] Amongst the fun learning programmes and activities offered during the Festival are Family Drawing & Colouring Competition, Needs & Wants Hunt, Giant Word Search, *Cari & Kira Duit* Game, Cross-BINGO, Origami Animal Money, Making Greeting Cards from Recycled Materials, Paint Your Own Tabung, Coin Engraving Workshop, Activity Mission Pack, Kijang Masterchef, and more.

Notes: BNM MAG and Museum Shop re-opened to the public with a limited capacity in December 2021. Initially, walk-ins and group visits were not allowed. In July 2022, BNM MAG fully re-opened to walk-in visitors every day from 10.00 am to 5.00 pm (closed between 1.00 pm to 2.00 pm for sanitisation), except Mondays.

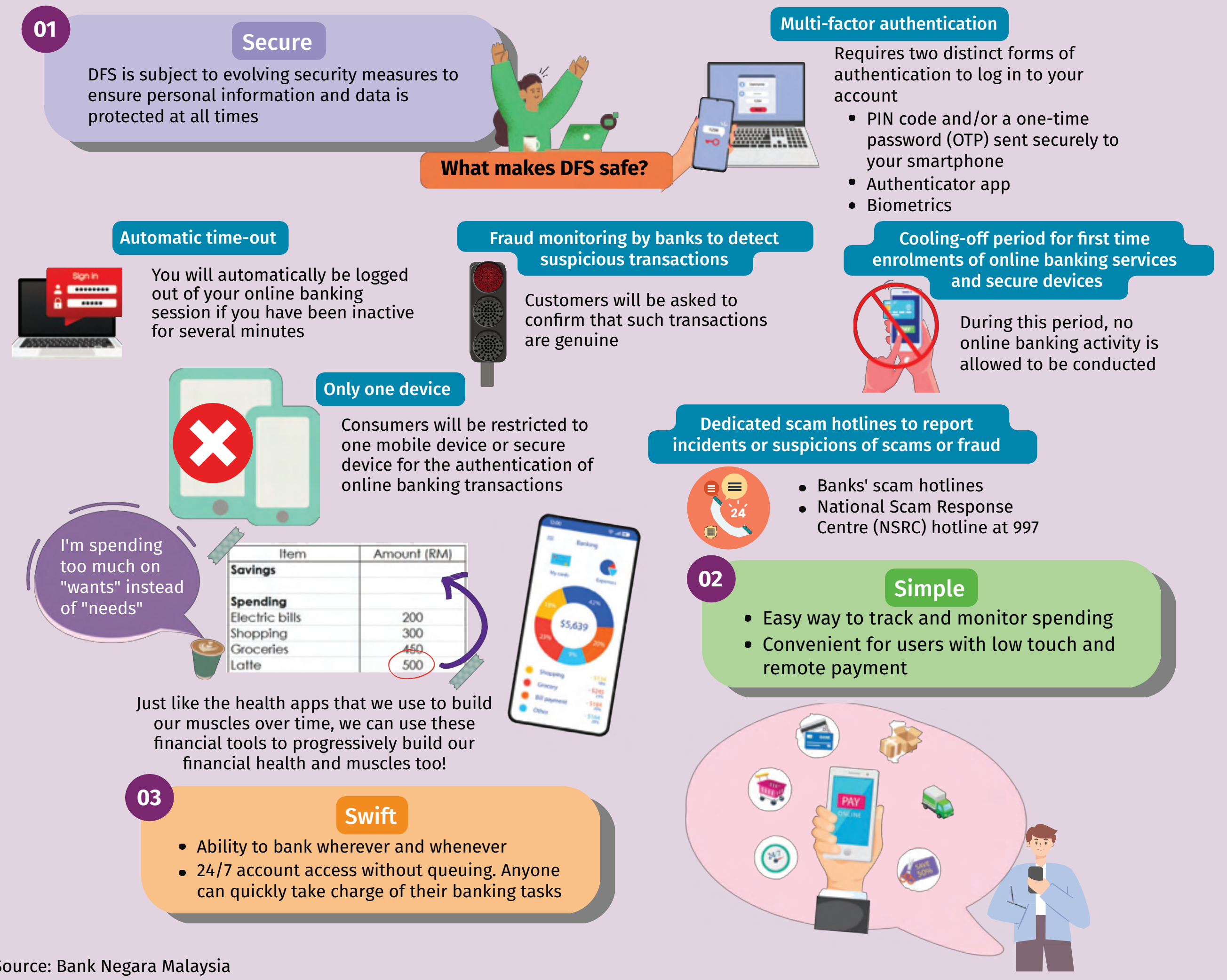
Source: Bank Negara Malaysia

Let's Go Digital Confidently

While digital financial services (DFS)[1] have been around for a while now, the pandemic has accelerated their adoption at an unprecedented pace. Furthermore, there is an increased preference among consumers to choose cashless payment due to the growth in the gig economy, e-commerce[2] and digital nomads[3], as well as the 'low-touch' experiences offered by DFS. The recent Financial Capability and Inclusion Demand Side Survey 2021 (FCI Survey 2021) conducted by the Bank estimated that 74% of Malaysians use DFS. Similar observations by the World Bank's Global Findex Survey 2021 showed that 79% of Malaysian adults use digital payments, of which 42% did so for the first time during the pandemic.

Recognising the potential of digital channels[4] and consumers' growing desire for convenience and agility, banks have continued to expand their digital offerings to provide integrated solutions that meet consumers changing lifestyle (Diagram 1).

Diagram 1: Features of DFS - Secure, Simple, Swift



Source: Bank Negara Malaysia

[1] Comprise a broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances and insurance. It also includes mobile financial services - Alliance for Financial Inclusion (AFI) Digital Financial Services Working Group https://www.afi-global.org/working-groups/dfs/

[2] Mahadhir Aziz. (23 June 2022). *MDEC Tech Trends: Pandemic-Induced Growth of Digital Payments Propel Malaysia Into Next Fintech Wave.* https://mdec.my/news/mdec-tech-trends-pandemic-induced-growth-of-digital-payments-propel-malaysia-into-next-fintech-wave/

[3] People who perform their work online from anywhere (e.g. cafe, co-working spaces, or other countries) rather than at a fixed office or business location

[4] *Majority of Malaysians can go without cash for more than a week as digital payment usage increase – Visa Study* (13 January 2022). https://www.visa.com.my/about-visa/newsroom/press-releases/majority-of-malaysians-can-go-without-cash-for-more-than-a-week-as-digital-payment-usage-increases-visa-study.html

Low awareness and trust, confidence and still limited digital financial literacy, however, remain as barriers for some segments of society to adopt and reap the benefits of DFS. This underscores the importance of financial literacy as an important life skill that equips consumers with the knowledge and resources to navigate day-to-day financial activities effectively, responsibly and confidently.

Enhanced financial literacy, including digital financial literacy, ultimately empowers consumers to take better advantage of DFS in managing their day-to-day finances, leading to better lifestyle choices and well-being. For example, there are many digital do-it-yourself apps or tools that can help consumers organise their daily finances. Diagram 2 captures some common ways in which consumers have gone digital with their finances.

Diagram 2(a): Manage Your Finances Digitally

1 Build your savings with simple management tools online

SAVING

Saving money is essential to building wealth. Look out for a **microsaving app** that can integrate savings into your daily life. Some apps also allow you to set your financial goals. You can direct debit the amount from your account to your financial goal account - it is hassle-free!

MICROSAVING APP?

- Helps to save automatically in small and affordable amounts. Your small savings do add up
- Explore this function in banking or financial apps that are regulated by regulatory authorities
- Some have round-up features - allow the transfer of the spare change from your online transactions to a designated saving account or an investment account

Round-ups

Your expenses will be rounded-up to the nearest RM and the spare change will be automatically placed into your savings

2 Use e-wallet for convenience and safer transactions

NO MORE "OOPS, I FORGOT MY WALLET!"

01 Convenient

Whether you shop online, in-store or in an app, your e-wallet stores your information for easy and quick checkouts

02 Secure

- Your information is encrypted and not shared with third-party sources
- If you lose your physical wallet, your cash and cards can easily be stolen as compared to e-wallet

Take extra steps to safeguard your e-wallet

- Protect your phone and e-wallet with password or biometric authentication
- Keep your phone software updated at all times
- Install or enable security features. These can help you:
  - Locate your phone from any computer
  - Lock your phone to restrict access
  - Wipe personal info and e-wallet credentials from your phone

03 Rewarding

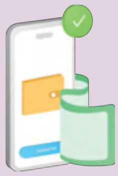
- Most e-wallet issuers offer users with extra incentives, exclusive deals or points
- You can save money by utilising the incentives or redeeming the points for your next purchase

04 Organised

- You can easily track your transactions in e-wallet
- E-wallet can provide an overview of your spending patterns – give insights as to where you could improve your financial management

Source: Bank Negara Malaysia

Diagram 2(b): Manage Your Finances Digitally



3 **Look out for online tools and resources to manage your finances**

FEN FINANCIAL EDUCATION NETWORK

Financial Education Network (FEN) navigational website

www.fenetwork.my

- Financial literacy tools and resources for all life stages
- Wide range of topics by FEN members and partners

facebook.com/myfenetwork

instagram.com/myfenetwork

Financial Education Network

tiktok.com/myfenetwork

facebook.com/InvestSmartSC/

facebook.com/amaranpenipuan

Source: Bank Negara Malaysia

With significant growth in the number of financial apps and tools, consumers need to be digitally and financially astute to identify suitable digital products and services and use them wisely, including for investment purposes (Diagram 3).

Diagram 3(a): Be a Smart Online Financial Consumer

1 Explore opportunities for online investment that are licensed by the Securities Commission Malaysia

- Do your own research before you invest and understand the products' associated risks
- Be clear on your investment objectives

DIGITAL ASSETS

e.g. cryptocurrencies and stablecoins

- A source of opportunity or loss due to high price fluctuations
- Regulated by the Securities Commission Malaysia

OBSERVATIONS

Malaysians have **unrealistic** expectations on investment returns, which causes them to be susceptible to scammers

86% Claim to understand that high returns relate to high risks

however...

53% View annual return of between 20% - 30% per annum (which is unrealistic) as an acceptable return associated with low to medium risks

Source: "The Financial Capability and Inclusion Demand Side Survey 2021" box article in BNM's Financial Stability Review: First Half 2022

Do not deal with unlicensed or unauthorised entities or individuals to avoid various risks

You may not have access to legal recourse in the event of a dispute

Always verify against:

- Financial Consumer Alert List by Bank Negara Malaysia
  - Entities or schemes wrongly perceived or represented as being licensed or regulated by Bank Negara Malaysia
- Investor Alert List by the Securities Commission Malaysia
  - Unauthorised websites, investment products, companies and individuals

EXPOSES TO RISKS OF

Losing money from investment scams

Breaking the law if involved in mule accounts and become the target of authority and investigation

2 Assess your risk appetite and tolerance level

Risk appetite

The amount of risk you are willing to accept to achieve your investment objectives

Risk tolerance

Acceptable deviation from your risk appetite

Source: Bank Negara Malaysia

Diagram 3(b): Be a Smart Online Financial Consumer

3 Get impartial advice from licensed financial planners, licensed Digital Investment Management (DIM) companies or authorities before you invest

DIM companies aim to replicate many of the key activities performed by traditional fund managers through online access

4 The best defence against scammers is knowledge

Learn to spot investment scams and their common features with T.I.P.U formula by the Securities Commission Malaysia

T — Tidak akan rugi

No loss in investment

- Investors are promised that their investments are safe and no losses will be suffered

I — Indah khabar dari rupa

Too good to be true

- If it is an unbelievable deal, it is most likely not real

P — Peluang hanya sekali

Offer for a limited time only

- If it is a legitimate scheme, there should not be any rush in making your decision

U — Untung besar

Huge returns

- Do not fall for the sweet deals and purportedly big unusual profits on your investment

Source: Bank Negara Malaysia

Despite the more pervasive use of DFS, the recent FCI Survey 2021 findings showed that the level of digital financial literacy among Malaysians is still low. This gap would increase the risks of consumers falling prey to online fraud such as phishing, hacking attacks, unauthorised use of data and being used as 'mule accounts'. Reported cases of victims falling prey to financial fraud and scams point to the compromise of personal information as the dominant risk factor. Taking steps to learn and build good cybersecurity habits to protect personal information, especially when using any digital platform to manage finances, can therefore go a long way to help reduce the chances of becoming a scam victim (Diagram 4).

Diagram 4(a): Take Control of Your Personal Information on Online Platforms

Your account is your responsibility

Do not disclose your financial or security information e.g. username, password, TAC/OTP to anyone (bank or government officials, close friends and family members included)

Use passphrases (instead of passwords) for each login account. Keep it a secret between you and yourself

Password is a combination of letters and symbols. Passphrase is created based on meaningful experience using sentence, words and symbols without personal information

Password	Passphrase
At least 8-12 characters	About 20-30 characters
May be meaningful or may not be meaningful	Should always be meaningful
Hard to remember	Easier to remember
Easier to crack	Hard to crack
Exchange letters for numbers and symbols e.g. 'at' with @, S with $	Random words that make up a phrase or sentence. Can exchange letters for numbers and symbols
Example: S@ra#0708 (approximate crack time: 6 hours)*	Example: Iloven@silem@kandte4 (approximate crack time: 148 years)*

*https://www.useapassphrase.com/

Do not save your passphrases (or passwords) in your browsers

they are easy to break into!

Do not allow your account to be used by a third party or share your password, including with your close friends or family members

DID YOU KNOW?

- 4 of 10 Malaysians **share passwords and/or PINs** of bank accounts with close friends
- 9 of 10 Malaysians **did not regularly change** online passwords for online shopping and personal finance
- 6 of 10 Malaysians **did not pay attention** to the security of a website before making an online transaction

Source: "The Financial Capability and Inclusion Demand Side Survey 2021" box article in BNM's Financial Stability Review: First Half 2022

Diagram 4(b): Take Control of Your Personal Information on Online Platforms

Be a digitally-savvy consumer

Be alert for phishing websites or malicious apps — do not fall for clickbait

Do not reply to suspicious emails, SMS, WhatsApp, or Telegram, click any link or download any attachment from an untrusted source. It provides easy access for malware to penetrate your devices

DID YOU KNOW?
Malware is a universal term to describe malicious software that can steal your sensitive information e.g. passwords, and view your digital activity

- ONLY download apps from Google Play Store, Huawei AppGallery or Apple App Store
- If you think you have installed a malicious app, immediately uninstall or remove it from your phone

Be suspicious of pop-ups — often disguised as a legitimate part of a website, but too frequent pop-ups could be phishing attempts

Ignore calls from unknown numbers, especially from different area codes and prefixes

WHEN IN DOUBT

Call the official numbers to verify. Banks or government agencies will never ask for your password and PIN, or instruct you to transfer money to another account

Handy tips to perform online transactions

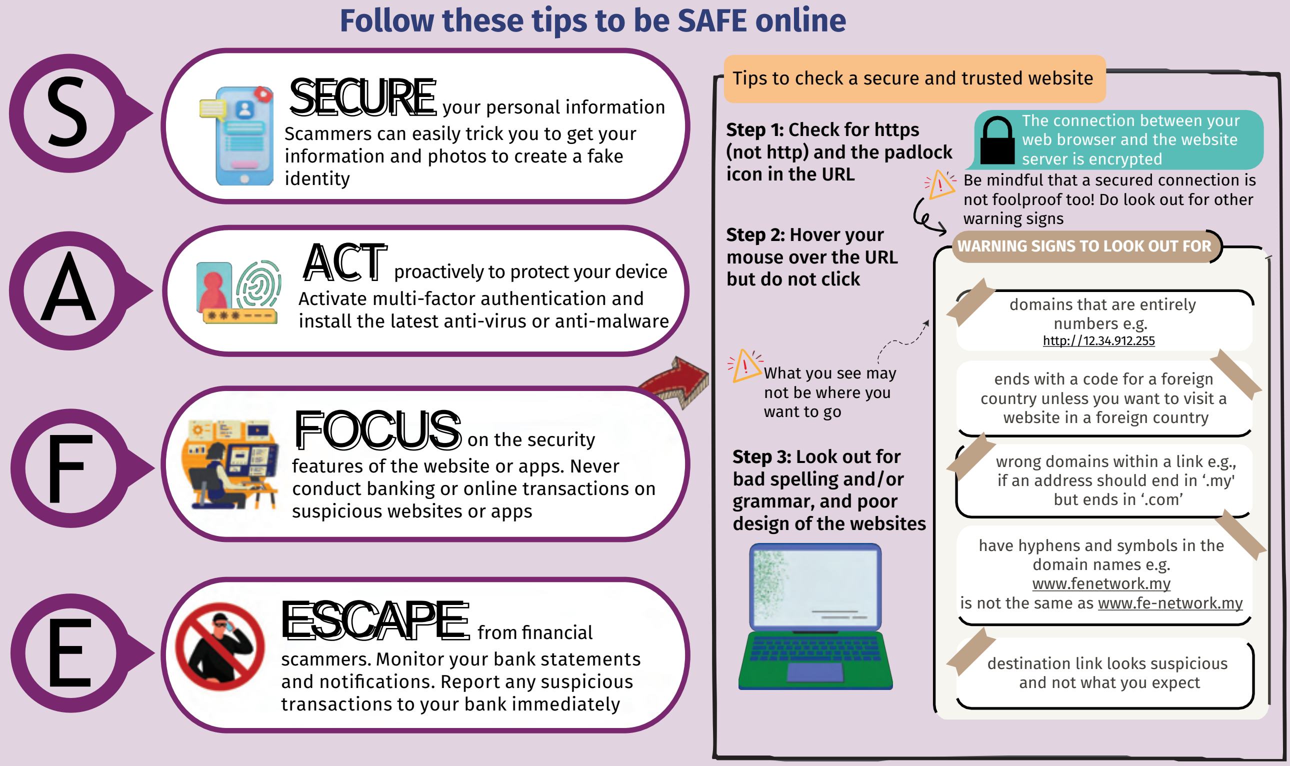
Do not use public Wi-Fi or a shared computer when conducting banking transactions

If it is really necessary, use a virtual private network (VPN) - this creates a private connection between your devices and the Internet

Log out of your online banking account or apps when you have completed your transactions

Source: Bank Negara Malaysia

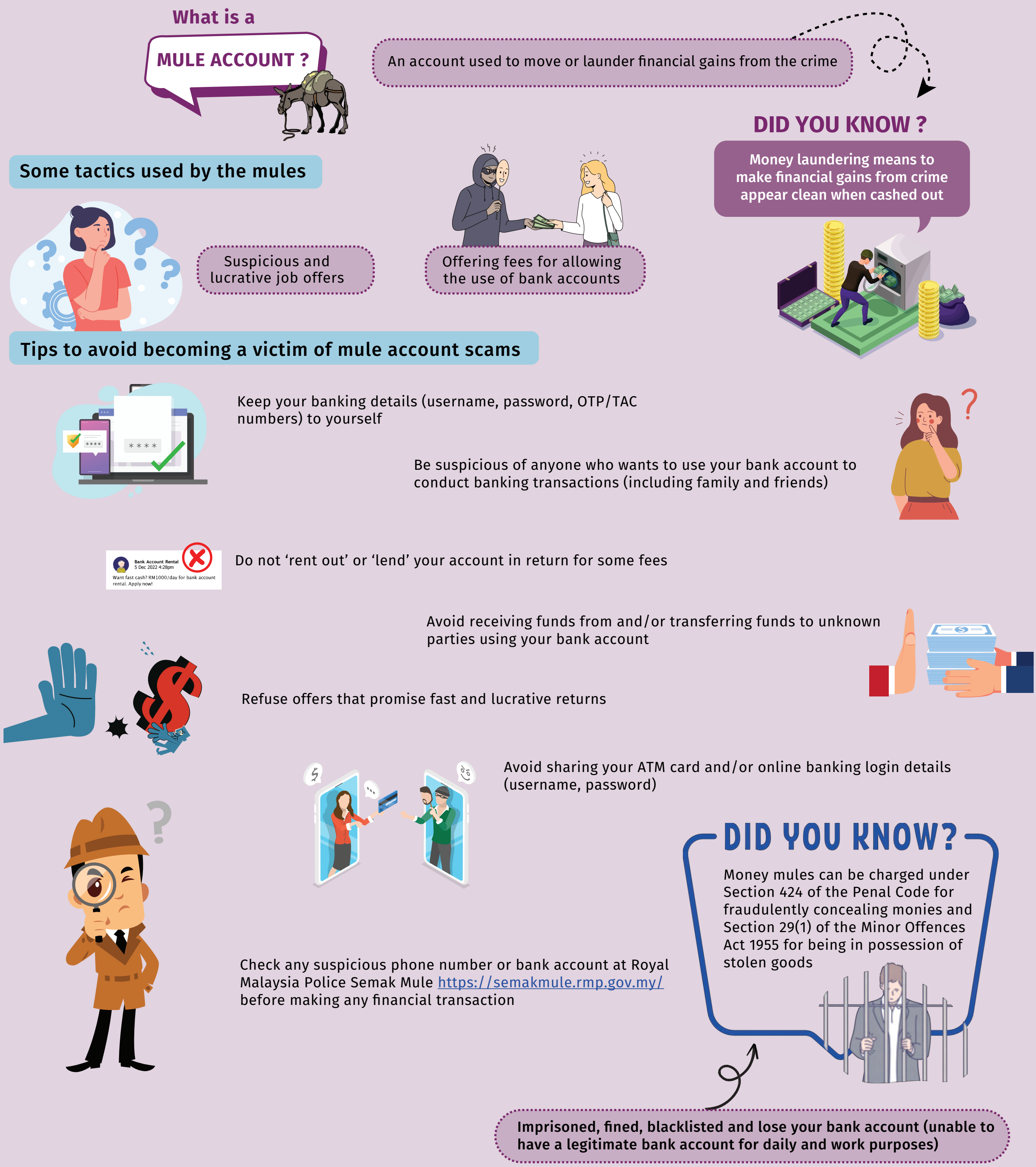
Diagram 4(c): Take Control of Your Personal Information on Online Platforms



Source: Bank Negara Malaysia

Scammers will always find ways to launder their financial gains (or stolen money). They will likely need to move their proceeds from illegal activities via a bank at some point. The bank account used to launder the money becomes a 'Mule Account', making the account holder a 'Mule' (Diagram 5).

Diagram 5: Do not be a Mule!



Source: Bank Negara Malaysia

Indeed, consumers themselves are the best defence in the battle against scammers. However, in response to the increasing trend of online financial scams, the National Scam Response Centre (NSRC) has been established to enable swift and integrated action to tackle cyber fraud cases. If you have been scammed or think that you are a victim of a scam, take immediate steps to report the incident to your bank or to NSRC (Diagram 6).

Diagram 6: What to do if you have been scammed online?

If you fall prey to a scam or suspect that you may be a victim of a scam

STEP 1

24/7

Immediately call your **Bank's scam hotline (24 hours a day, 7 days a week)**. You can find the hotline number at your bank's website or BNM's Financial Sector Participants Directory at https://www.bnm.gov.my/regulations/fsp-directory

OR

Call the **National Scam Response Centre (NSRC) at 997** (8:00 a.m. to 8:00 p.m. daily, including public holidays) within 24 hours of the scam incident

Call 997

If you have already reported to your bank, you do not have to make another report to the NSRC

STEP 2

Lodge a **police report** after you have contacted your bank or NSRC to allow authorities to initiate a formal investigation

REMEMBER!

Be prepared to provide these information to your bank and NSRC

- Brief description of the scam incident (e.g. chronology of events)
- Your personal details (name, contact, ID, bank account number)
- Scammer's details (name, contact)
- Transaction details (bank account number(s), amount, time of transfer)
- Evidence to the police (e.g. screenshots of conversations with scammers)

Contact your bank even if the incident happened more than 24 hours to help authorities take action against the criminals

FAQ

Find out more about NSRC at https://nfcc.jpm.gov.my/index.php/en/soalan/about-nsrc

Source: Bank Negara Malaysia

While there is no assurance that you can recover your money, it is important to call your bank or the NSRC's 997 hotline immediately once you discover that you have been scammed to facilitate the real-time interception of the stolen money to prevent more financial losses.

If customers have other concerns or are dissatisfied with the services provided by their financial service providers (FSPs), the first course of action is to speak to the FSPs. FSPs regulated by BNM have a dedicated Complaint Unit to resolve customer disputes. If no response is received after 14 days from the timeframe provided by the FSPs or they are dissatisfied with the FSPs' decisions and failed to find an amicable solution, customers may refer to BNMLINK through eLINK form . BNMLINK accepts general enquiries and complaints on matters relating to FSPs that are regulated by BNM. Customers may also refer to the relevant redress channels to address their complaints. This will depend on the nature of the complaint. For example, a customer can escalate his complaint to the Ombudsman for Financial Services (OFS) which serves as an independent alternative avenue to resolve a monetary dispute involving a licensed bank, insurance company or takaful operator. Its services are free of charge for financial consumers. OFS accepts disputes related to direct financial losses up to RM250,000 or losses caused by unauthorised transactions through the internet or mobile banking, ATM or cheque up to RM25,000. Further information can be obtained at https://www.ofs.org.my/en/. If consumers are still not satisfied with the resolution received from the redress channels, the consumers may proceed to seek legal advice.

In short, with the increasing range and importance of DFS, its effective use could help consumers to better manage their finances, take full advantage of the benefits offered, as well as spotting and avoiding scams. In other words, being equipped with digital financial literacy can help consumers to plan their finances, increase financial resilience and well-being, and embrace the digital world confidently.

International Engagements

The Bank's approach to international engagements in 2022 was centered on enhancing discourse on policy challenges especially for emerging economies. It also aims to improve global and regional collaboration in strengthening resilience and promoting sustainability.

Enhancing global discourse on policy challenges

During the year, the Bank worked with many international organisations across various platforms to advance policy discussion and identify solutions on issues of importance to Malaysia and emerging market economies. The Bank co-organised a joint seminar with the IMF[1] on *Policy Challenges and Tools in an Uncertain, Complex and Evolving Landscape*. The seminar discussed the effects of rising global interest rates, interaction between fiscal and monetary policies, and potential responses to these policy challenges.

We also partnered with the BIS[2] to publish a report on *Foreign Exchange Markets in Asia-Pacific*. The report provided an overview and policy takeaways on the region's foreign exchange market, including the development of hedging markets and the relationship between the foreign exchange market and capital flows. As chair of the BIS Markets Committee Workshop on Funding for Lending Programmes, the Bank led discussions on the nature of low-cost funding by central banks for targeted lending programmes (such as BNM's SME[3] Automation and Digitalisation Fund, and Special Relief Facility), including programme objectives, design and trade-offs. *Insights from the workshop* provided central banks with lessons that can facilitate future policy design relating to funding for lending and its implementation.

Strengthening resilience and promoting sustainability

Transitioning towards a greener economy: The Bank intensified our international advocacy for a just and orderly transition towards a greener economy. Together with partners such as Banque de France, Deutsche Bundesbank, De Nederlandsche Bank and the Monetary Authority of Singapore, we advanced the sustainability agenda across various major platforms such as ASEAN, EMEAP[4] and the NGFS.[5] Given that expertise in climate-related risks remains limited within the financial sector, we emphasised the importance of capacity building and adaptability in our frameworks and approaches when presenting at COP27,[6] the IMF and UNESCAP.[7]

The Bank also collaborated with the World Bank to produce a joint report titled An *Exploration of Nature-Related Financial Risks in Malaysia*. The report highlights how Malaysian banks are exposed to a broad range of nature-related physical and transition risks. These risks include resource overuse and pollution, sudden introductions of climate policy, and severe flooding. The exercise helped the Bank better understand the impact of nature-related risks to the Malaysian financial sector. This is further detailed in Chapter 2.2: *Towards a Greener Financial System*.

We remain committed to developing the ASEAN Taxonomy for Sustainable Finance through the ASEAN

[1] International Monetary Fund
[2] Bank for International Settlements
[3] Small and medium enterprises
[4] Executives' Meeting of East Asia-Pacific Central Banks
[5] Network for Greening the Financial System
[6] The 2022 Conference of the Parties of the United Nations Framework Convention on Climate Change (COP27), held in Egypt on 6-20 November 2022, was the latest in a series of annual UN conferences involving the 198 signatory countries of the UNFCCC. The COPs discuss policy action and assess progress relating to climate change.
[7] United Nations Economic and Social Commission for Asia and the Pacific.

Taxonomy Board. Beyond ASEAN borders, as the co-chair of the NGFS Task Force on Capacity Building, the Bank led efforts to identify good practices for central banks and supervisors. These include designing and developing capacity building programmes, mapping training needs and supply, and facilitating the upskilling of practitioners.

Advancing Islamic finance: The Bank continued to make good progress in elevating Malaysia's leadership in Islamic finance globally, in line with our aspiration to position Malaysia as an international gateway for Islamic finance. To this end, we shared Malaysia's developmental experience and challenges faced in Islamic finance and fintech with OIC[8] member countries.

The CSAA,[9] a global network of Shariah scholars pioneered by the Bank to deliberate on Shariah issues, continues to gain support as the number of participating countries increased to 18 in 2022.[10] As a member of the IFSB,[11] we supported their efforts as an international standard-setting body for the Islamic financial services industry. We participated in the 4*th* *IFSB Innovation Forum* as well as the *SC-UNDP International Islamic Finance Conference*. Through these engagements, the Bank shared the importance of embracing digitalisation, role of Shariah boards in supporting innovation for social and sustainable development, building a wide network of trusted partners, and leveraging the financial sector to enable an orderly transition to a greener economy.

Preventing and combating money laundering, terrorism financing and proliferation financing: In 2022, the Bank actively participated in the activities of FATF[12] and FATF-style regional bodies. In July, the Bank, as co-chair of the APG,[13] hosted the first hybrid APG Annual Meeting. The meeting attracted 400 international delegates. It discussed policy issues relating to serious financial crimes and technical assistance for APG member countries. The Bank also assumed the role of co-chair of FICG[14] comprising financial intelligence agencies from ASEAN, Australia and New Zealand. As FICG co-chair, Malaysia's priority includes the Multi-Jurisdictional Anti-Fraud Project aimed at coordinating operational strategies to combat frauds and scams. The FICG will also be organising a hackathon in May 2023 to encourage public and private sector use of data analytics for anti-money laundering and terrorism financing operations.

Strengthening external financial safety nets[15]: The Bank's external financial safety net arrangements augment Malaysia's foreign exchange reserves by providing an additional layer of resilience against potential financial crises. In June, the Bank signed the *Renminbi Liquidity Arrangement* with the BIS. This arrangement allows participating central banks – comprising the Bank, the People's Bank of China, Monetary Authority of Singapore, Bank Indonesia, Hong Kong Monetary Authority, and the Central Bank of Chile – to access liquidity from a reserve pool which will provide support in times of market volatility. Each central bank contributed a minimum of RMB15 billion or equivalent in USD towards this reserve pool placed with the BIS, which implements this arrangement.

The Bank also renewed the Local Currency Bilateral Swap Agreement with Bank Indonesia in September. The agreement was first signed in 2019 and provides liquidity of up to RM8 billion or IDR28 trillion that acts as a backstop facility to alleviate frictions in cross-border settlements.

The Bank also promoted discussions on financial safety nets by organising the RFSN[16] in August. The discussions focused on how RFSN in East Asia could play a more functional and prominent role within the global financial safety net framework. In particular, participants engaged on the importance of CMIM[17] as a safety net arrangement that is useable and accessible to members, as well as grounded in the spirit of regional cooperation and self-help.

8 Organisation of Islamic Cooperation
9 Centralised Shariah Advisory Authorities in Islamic Finance
10 The CSAA is elaborated further in Chapter 1.5: *Promoting a Progressive and Inclusive Islamic Financial System* and the Spotlight Article on *Fostering International Connectivity among Central Shariah Boards in Islamic Finance*.
11 Islamic Financial Services Board
12 Financial Action Task Force
13 Asia/Pacific Group on Money Laundering, which the Bank co-chaired with the Australian Federal Police.
15 Financial Intelligence Consultative Group

15 Financial safety nets provide insurance via financing to mitigate against the impact of crises. These safety nets have four main layers: countries' own international reserves; bilateral swap arrangements whereby central banks exchange currencies to provide liquidity to financial markets; regional financial arrangements by which countries pool resources to leverage financing in a crisis; and the IMF. (Source: IMF)
16 Roundtable on Regional Financial Safety Net. 19 central banks, ministries of finance and international organisations participated in the event, including the Monetary Authority of Singapore; Bank Indonesia; the Ministries of Finance of China, Japan and Brunei Darussalam; and the ASEAN+3 Macroeconomic Research Office.
17 Chiang Mai Initiative Multilateralisation. CMIM is a multilateral currency swap arrangement for liquidity support among ASEAN+3 members. Its core objectives are to address balance of payment and/or short-term liquidity difficulties in the ASEAN+3 region, and supplement existing international financial arrangements.

Sharing knowledge in relevant areas of central banking: Financial and monetary stability within our region can only be possible if all central banks share a high level of proficiency, especially in a relatively new field such as sustainable finance. The Bank co-developed the *ASEAN Learning Curriculum on Sustainable Finance* in 2021 with the SEACEN Centre. Capacity building programmes based on this curriculum were introduced for the region's central bankers in 2022. Further, leveraging on the International Centre for Settlement of Investment Dispute, the Bank organised the ASEAN Investor-State Dispute Settlement (ISDS) Capacity Building Programme from February to April. The programme, which was aimed at enhancing the understanding of ISDS mechanisms and practising skills in the dispute settlement process, was attended by almost 100 participants from central banks, ministries and government agencies from all ASEAN countries.

In 2022, the Bank conducted 42 capacity building programmes in response to requests from 20 countries including ASEAN member countries, Turkiye, South Korea, Brazil, and Sri Lanka. These programmes were focused on the areas of Islamic finance, payments systems, and cash management. This provided opportunities for the Bank to foster stronger relationships, through the mutual exchange of experiences and lessons learnt between the Bank's and our international counterparts.

Deepening integration for trade and investment: To promote higher levels of trade and investments in the region, we signed the Memorandum of Understanding on Cooperation in Regional Payment Connectivity (RPC) with the Monetary Authority of Singapore, Bank Indonesia, Bank of Thailand and Bangko Sentral ng Pilipinas. The RPC will enable faster, cheaper inclusive payments among the five countries through participation in the next phase of Project Nexus, an initiative to connect the real-time payment systems of participating countries through a multilateral connectivity model. In turn, greater regional payment connectivity is expected to be a significant contributor to regional economic recovery and inclusive growth. The Bank's efforts to enhance cross-border payment services including participation in Project Nexus are detailed in Chapter 1.5: *Promoting Safe and Efficient Payment and Remittance Services*.

As the regulator of the financial sector, the Bank plays an active role in supporting Malaysia's participation in international trade and investment agreements and cooperation frameworks. The Bank negotiates elements relating to the financial services sector and investment matters to facilitate trade and investment, alongside advancing national priority areas. In 2022, the Bank participated in the review of the ASEAN-Australia-New Zealand Free Trade Agreement and the Frameworks on Cooperation in Digital Economy and Green Economy with Singapore, as well as the expansion of the Malaysia-Turkiye Free Trade Agreement.

Going Forward

Amidst the challenging economic and financial market environment in 2023, international cooperation and collective efforts are essential to enhancing mutual awareness of economic and financial developments. Such cooperation also contributes towards promoting the global and regional monetary and financial system while mutually strengthening the resilience of our economies.

The Bank will continue to collaborate with regional and strategic partners to deepen regional economic and financial linkages, advance the sustainability and climate change agenda, and further accelerate digitalisation and financial inclusion.

Governance

Governance

Governance

Bank Negara Malaysia is responsible for promoting monetary and financial stability conducive to the sustainable growth of the Malaysian economy. Our governance arrangements ensure that we continue to discharge our mandates effectively as a credible and independent institution. These arrangements are set out by statute – in the Central Bank of Malaysia Act 2009 and other laws that the Bank administers – as well as internal policies developed by the Bank over the years. Our governance framework continues to be aligned with global best practices and promotes accountability and high standards of integrity in discharging our duties and conducting our operations.

Board of Directors

The Board is chaired by the Governor and comprises the Deputy Governors, the Secretary General of Treasury, as well as Independent Non-Executive Members who form the majority of the Board. His Majesty the Yang di-Pertuan Agong appoints all members of the Board, except the Deputy Governors, who are appointed by the Minister of Finance. As set out in the Central Bank of Malaysia Act 2009, the Board is responsible for overseeing the management and operations of the Bank to ensure that we remain financially and operationally sound and that our financial resources are utilised effectively and efficiently for the purposes of delivering our mandates.

Throughout 2022, the Board continued to provide oversight on our operations and maintain close and regular engagements with our senior management on key policy measures to support Malaysia's economic recovery. The Board contributed invaluable perspectives and advice on our longer-term strategic initiatives including efforts for an orderly transition to a greener economy, as well as the recalibration of our reserves management and investment benchmark and strategies amidst significant global headwinds. The Board was also highly supportive of our efforts to ensure organisational integrity and effectiveness. This includes the implementation of a new Code of Conduct to promote the highest standards of ethics and conduct by our staff, and the modernisation of our Risk Appetite Statement to enhance our risk culture.

Board Committees

The Board is supported by three committees – the Board Governance Committee, the Board Audit Committee and the Board Risk Committee. Each committee, consisting solely of Independent Non-Executive Members, is governed by its own Terms of Reference to render effective assistance to the Board in ensuring adequate internal checks and balances on the management and operations of the Bank.

	Board Governance Committee (BGC)	Board Audit Committee (BAC)	Board Risk Committee (BRC)
Roles and Responsibilities	• Oversees the Bank's governance framework and practices • Reviews and makes recommendations to the Board on the Bank's budget, business plan and remuneration policies • Recommends the appointment and reappointment of members of the Board and other legislated committees of the Bank such as the Monetary Policy Committee, the Financial Stability Executive Committee, the Shariah Advisory Council and the Monetary Penalty Review Committee	• Oversees the integrity of the Bank's accounts and financial statements • Oversees the adequacy of the Bank's internal controls and compliance with legal requirements and internal policies • Reviews and approves the Bank's audit framework, audit charter, internal audit plan and reports, and oversees management actions to address material findings	• Oversees the implementation of the Bank's enterprise risk management framework • Oversees the Bank's management of financial, operational, reputational and IT and cybersecurity risks, including risk governance, structure and accountabilities in these areas

In 2022, the Board recorded an attendance rate of 96% for Board meetings and 95% for Board Committee meetings, as illustrated in the following table:

Designation	Members	Board	BGC	BAC	BRC
Chairperson	Tan Sri Nor Shamsiah Yunus	13/13			
Ex officio	Datuk Abdul Rasheed Ghaffour	13/13			
	Datuk Jessica Chew Cheng Lian	13/13			
	Dato' Marzunisham Omar	13/13			
Independent Non-Executive	Chin Suit Fang[1]	11/11	5/5	5/5	1/1[^]
	Dato' Dr. Nirmala Menon a/p Y.B. Menon[2]	13/13	3/3[^#]	6/6	4/4
	Tan Sri Mohamed Azman Yahya[3]	13/13	7/7	3/3[#]	4/4
	Kamarulazman Muhamed[4]	10/10	2/2[#]	4/4	3/3

Retired in 2022/January 2023

Designation	Members	Board	BGC	BAC	BRC
Ex officio	Datuk Seri Asri Hamidon @ Hamidin[5] *(Secretary General of Treasury)*	9/13[*]			
Independent Non-Executive	Dato Sri Lim Haw Kuang[6]	3/3	1/1		1/1
	Dato' Paduka Sulaiman Mustafa[7]	10/11[*]	5/6[*]	2/4[*]	1/1[^]

Note:
1 Reappointed as member of the Board, BGC and Chairperson of BAC on 15 February 2023.
2 Appointed as Chairperson of BRC on 27 January 2022 to replace Dato Sri Lim Haw Kuang as part of the Board's succession planning.
3 Appointed as Chairperson of BGC on 27 January 2022 to replace Dato' Paduka Sulaiman Mustafa as part of the Board's succession planning.
4 Appointed as member of the Board, BAC and BRC on 1 January 2022.
5 Retired on 3 January 2023.
6 Retired on 28 February 2022.
7 Retired on 31 December 2022.
* Absent due to unavoidable prior commitments or health reasons.
^ Non-members attending by invitation, to update the Independent Non-Executive Members on specific matters under consideration by the Committees.
# Attended as interim Chairperson and/or members from October to December 2022.

Note of Appreciation:
The Board of Directors wishes to extend its appreciation and gratitude to Datuk Seri Asri Hamidon @ Hamidin and Dato' Paduka Sulaiman Mustafa for their contributions to the Board.

Board Induction and Development

Newly appointed Independent Non-Executive Members undergo a comprehensive on-boarding programme encompassing our mandates, policy priorities, governing frameworks and operations, to enable them to perform their oversight role effectively.

The Independent Non-Executive Members of the Board comprise senior and experienced individuals from an array of professional backgrounds, including in economics, accounting and finance, banking and insurance, information and technology, risk management and audit. The Bank benefits from the collective wisdom and insights of the Board as well as their in-depth understanding of issues in the financial, business and public sector. Throughout their tenure, they also participate in education development programmes on contemporary themes affecting central banks and engage in policy discourse with the Bank's management and staff. These include reserves management, central bank digital currencies, cybersecurity and climate risk management.

Board of Directors

Tan Sri Nor Shamsiah Yunus
Chairperson

Appointed to the Board: 1 July 2018

Qualifications
- Bachelor of Arts in Accountancy, University of South Australia, Australia
- CPA Australia
- Malaysian Institute of Accountants

Key Appointments and Directorships
- Chairperson, Board of Directors of The SEACEN Centre
- Member, Board of Governors of The SEACEN Centre
- Council Member, Islamic Financial Services Board
- Member, Board of Directors of Perbadanan Insurans Deposit Malaysia
- Member, Governing Board of International Islamic Liquidity Management

Past Experience
- Assistant Director, Monetary and Capital Markets Division, International Monetary Fund
- Deputy Governor and member of Board of Directors, Bank Negara Malaysia

Datuk Shaik Abdul Rasheed Abdul Ghaffour
Ex Officio Member

Appointed to the Board: 16 July 2016

Qualifications
- Bachelor of Economics, University of Malaya, Malaysia
- Master of Business Administration, University of Oxford, United Kingdom
- Asian Institute of Chartered Bankers

Key Appointments and Directorships
- Chairperson, Board of Directors of The ICLIF Leadership and Governance Centre
- Member, Board of Directors and Executive Committee of The SEACEN Centre
- Member, *Jawatankuasa Pengurusan Kursi* of Tun Ismail Ali Chair, University of Malaya
- Member, Malaysia International Islamic Financial Centre Leadership Council

Past Experience
- Alternate Executive Director, South East Asia Voting Group on the International Monetary Fund Executive Board
- Assistant Governor, Bank Negara Malaysia

Board of Directors

Datuk Jessica Chew Cheng Lian
Ex Officio Member

Appointed to the Board: 1 January 2018

Qualifications
- Bachelor of Commerce (Accounting and Finance), University of Melbourne, Australia
- Chartered Banker Institute (Scotland)
- Asian Institute of Chartered Bankers
- CPA Australia

Key Appointments and Directorships
- Member, Board of Directors of Danamodal Nasional Berhad
- Alternate Member, Board of Directors of Perbadanan Insurans Deposit Malaysia

Past Experience
- Assistant Governor, Bank Negara Malaysia
- Advisor, Board of Directors of Malaysia Accounting Standard Board

Dato' Marzunisham Omar
Ex Officio Member

Appointed to the Board: 15 June 2020

Qualifications
- Bachelor of Arts (Economics), University of Cambridge, United Kingdom
- Master of Arts (Economics), University of Cambridge, United Kingdom

Key Appointments and Directorships
- Member, Board of Directors of ASB Management Sdn Bhd
- Member, Board of Directors of Malaysian Investment Development Authority

Past Experience
- Executive Director, International Monetary Fund
- Assistant Governor, Bank Negara Malaysia

Board of Directors

Datuk Johan Mahmood Merican
Ex Officio Member

Appointed to the Board: 27 February 2023

Secretary General of Treasury, Ministry of Finance

Qualifications
- Bachelor of Arts (Economics), University of Cambridge, United Kingdom
- Associate Chartered Accountant, Institute of Chartered Accountants in England and Wales

Key Appointments and Directorships
- Chairperson, Board of Directors of Inland Revenue Board of Malaysia
- Chairperson, Board of Directors of Retirement Fund (Incorporated)
- Chairperson, Board of Directors of Public Sector Home Financing Board
- Member, Board of Directors of Employees Provident Fund
- Member, Board of Directors of MyDIGITAL Corporation
- Member, Board of Directors of Universiti Malaya

Past Experience
- Deputy Secretary General of Treasury (Policy), Ministry of Finance
- Director of National Budget Office, Ministry of Finance
- Chief Executive Officer, Talent Corporation Malaysia Berhad (TalentCorp)
- Principal Private Secretary to the Minister in the Ministry of Finance and Economic Planning Unit
- Deputy Director General (Human Capital), Economic Planning Unit
- Head, Civil Service Delivery Unit
- Head, The 2050 National Transformation Unit (TN50)

Chin Suit Fang
Independent Non-Executive Member

Appointed to the Board: 1 November 2019

Qualifications
- Malaysian Institute of Accountants
- Malaysian Institute of Certified Public Accountants

Key Appointments and Directorships
- Member, Monetary Penalty Review Committee

Past Experience
- Partner, PwC Malaysia
- Markets Leader for PwC Malaysia and PwCMYVN (Malaysia & Vietnam)
- Corporate Responsibility and Diversity & Inclusion Leader, PwC Malaysia
- Member, PwC Global Gender Advisory Council
- Mentor for Women in Leadership Malaysia by ICAEW & TalentCorp Malaysia

Board of Directors

Dato' Dr. Nirmala Menon a/p Y.B. Menon

Independent Non-Executive Member

Appointed to the Board: 16 March 2020

Qualifications

- Bachelor in Medicine, University of Mysore, India
- Postgraduate qualifications in Insurance Medicine

Key Appointments and Directorships

- Member, Board of Directors of Sime Darby Berhad
- Member, Board of Directors of Aviva Singlife Holdings Private Limited (Singapore)
- Member, Board of Directors of Ramsay Sime Darby Health Care
- Member, Board of Directors of Amanat Lebuhraya Rakyat Berhad
- Member, Board of Directors of Sistem Penyuraian Trafik KL Barat Sdn Bhd
- Member, Board of Directors of Lingkaran Trans Kota Sdn Bhd

Past Experience

- Member, Board of Directors of AXA Affin General Insurance Berhad
- Member, Board of Directors of Khazanah Nasional Berhad
- Member, Board of Directors of Avicennia Capital Sdn Bhd
- President and Chief Executive Officer, ING Malaysia Berhad
- Executive Vice President, Head of Designated Markets & Health Asia, Metlife Asia Pacific Limited
- Head of South Asia, ING Asia Pacific Limited
- Medical Officer, Hospital Kuala Lumpur

Tan Sri Mohamed Azman Yahya

Independent Non-Executive Member

Appointed to the Board: 1 June 2020

Qualifications

- Bachelor of Science (Economics), London School of Economics and Political Science, United Kingdom
- Institute of Bankers Malaysia
- Institute of Chartered Accountants in England and Wales
- Malaysian Institute of Accountants

Key Appointments and Directorships

- Chairperson, Board of Directors of Symphony House Sdn Bhd
- Chairperson, Board of Directors of Sepang International Circuit Berhad

Past Experience

- Chairperson, Board of Directors of Ranhill Utilities Berhad
- Chairperson, Corporate Debt Restructuring Committee
- Chairperson, Board of Directors of Pengurusan Danaharta Nasional Berhad[1]
- Member, Board of Directors of Khazanah Nasional Berhad
- Member, Board of Directors of Sime Darby Berhad
- Member, Board of Directors of AIA Group Limited
- Member, Board of Directors of PLUS Expressways Berhad
- Member to PEMUDAH, Financial Reporting Foundation, Capital Market Advisory Group, Malaysia Special Economic Committee

[1] Also served as the Managing Director of Pengurusan Danaharta Nasional Berhad prior to his appointment as Chairperson.

Board of Directors

Kamarulazman Muhamed
Independent Non-Executive Member

Appointed to the Board: 1 January 2022

Qualifications
- Association of Chartered Certified Accountants, Nottingham Trent University, United Kingdom
- Master of Science in Information System Management, Salford University, United Kingdom

Key Appointments and Directorships
- Founder and Chief Executive Officer, Aerodyne Group
- Member, Board of Directors of Malaysia Aerospace Industry Association
- Adjunct Professor, Universiti Islam Antarabangsa Selangor
- Member, Economic Action Council
- Member, Majlis Ekonomi Digital dan 4IR
- Member, National Robotics Direction Plans Steering Committee
- Member, Malaysia National Aerospace Council
- Member, Research Advisory Council, Universiti Teknologi PETRONAS

Past Experience
- Exco Member, Economic Planning Unit, Prime Minister's Department
- Business Exco, Majlis Amanah Rakyat
- Director and Country Manager, Computer Associates International

Dr. Nungsari Ahmad Radhi
Independent Non-Executive Member

Appointed to the Board: 15 February 2023

Qualifications
- Bachelor of Arts (Economics and Mathematics), Southern Illinois University, United States of America
- Master of Science (Mathematics), Southern Illinois University, United States of America
- Doctor of Philosophy (Economics), Purdue University, United States of America

Key Appointments and Directorships
- Member, Board of Trustees of Yayasan Rahimah binti Yusof

Past Experience
- Executive Chairperson, Malaysia Aviation Commission
- Executive Director, Khazanah Research Institute
- Managing Director, Prokhas Sdn Bhd (MOF (Inc.))
- Principal Officer, Board of Directors of DanaInfra Nasional Berhad
- Principal Officer and Member, Board of Directors of Pengurusan Danaharta Nasional Berhad
- Principal Officer and Member, Board of Directors of Syarikat Jaminan Kredit Perumahan Berhad
- Member, Board of Directors of Commerce Tijari Bank/CIMB Islamic Bank Berhad
- Member, Board of Directors of Bank Pertanian Malaysia
- Member, MARA Council
- Member, Malaysia Productivity Council

Senior Management

As provided by the Central Bank of Malaysia Act 2009, the Governor is responsible for the management of the Bank in discharging its mandates. In performing these duties, the Governor is assisted by a senior management team consisting of Deputy and Assistant Governors. The Bank's organisation structure is designed to promote clear lines of reporting and accountability across its wide-ranging functions.

Various management committees are established to enable the senior management team and other senior officers of the Bank to deliberate on the Bank's business, and in particular those involving the organisation's strategy and top-most priorities. These management committees include policy committees such as the Financial Stability Committee and the Joint Policy Committee, a committee tasked to deliberate cross-cutting issues and coordinate policies that may have impact on the financial system and the broader economy. The management committees enable the Bank to draw on diverse functional backgrounds and insights across the Bank to arrive at well-informed decisions through open and candid deliberations.

Supported by these structures, senior management sets internal policies and leads the operations of the Bank to ensure that it gives effect to its objects, carries out its functions and uses its resources in a manner that is effective, prudent and consistent with the interests of the Bank, for the benefit of the nation.

Management Committee

Front row (seated from left to right)

Nor Shamsiah Yunus
Governor

Aznan Abdul Aziz
Assistant Governor

Dr. Norhana Endut
Assistant Governor

Back row (from left to right)

Abdul Rasheed Ghaffour
Deputy Governor

Jessica Chew Cheng Lian
Deputy Governor

Marzunisham Omar
Deputy Governor

Adnan Zaylani Mohamad Zahid
Assistant Governor

Abd. Rahman Abu Bakar
Assistant Governor

Fraziali Ismail
Assistant Governor

Suhaimi Ali
Assistant Governor

Senior Officers

Governor	Nor Shamsiah Yunus
Deputy Governor	Abdul Rasheed Ghaffour
Deputy Governor	Jessica Chew Cheng Lian
Deputy Governor	Marzunisham Omar
Assistant Governor	Adnan Zaylani Mohamad Zahid
Assistant Governor	Aznan Abdul Aziz
Assistant Governor	Fraziali Ismail
Assistant Governor	Dr. Norhana Endut
Assistant Governor	Abd. Rahman Abu Bakar
Assistant Governor	Suhaimi Ali
Assistant Governor	Abu Hassan Alshari Yahaya *(appointed as Head of the Consumer Credit Oversight Board Task Force)*
Secretary to the Board	Fazlina Pawan Teh
Governor's Office	Nurashiqin Asri
Internal Audit	Marina Abdul Kahar
Risk Management	Beh Cheng Hoon
Ethics and Integrity Office	Santamarie Shamni Arulanandam
Legal	Izhar Ismail
Economics	Idwan Suhardi Hakim
Monetary Policy	Dr. Mohamad Hasni Sha'ari
International	Ida Harniza Johar
Strategic Communications	Shasha Kartini Ridzam
Investment Operations and Financial Markets	Mohamad Ali Iqbal Abdul Khalid
Foreign Exchange Policy	Albert See Choon Kwang
Data Management and Statistics	Ong Li Ming
Financial Development and Innovation	Lau Chin Ching
Islamic Finance	Nurul Izza Idris
Financial Inclusion	Nor Rafidz Nazri

Effective 1 April 2023

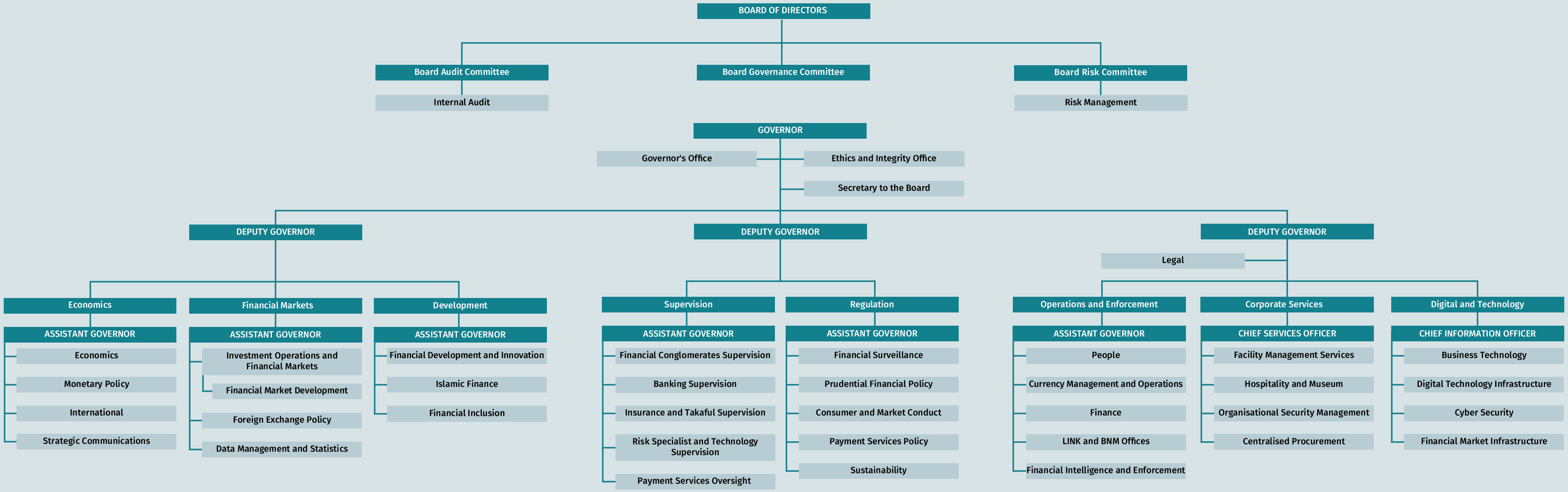
Financial Conglomerates Supervision	Hong Chin Pheng
Banking Supervision	Mohd Zabidi Md Nor
Insurance and Takaful Supervision	Hoo Hon Shiong
Risk Specialist and Technology Supervision	Hew Ee-Lu
Payment Services Oversight	Zarifa Izan Zainol Abidin
Financial Surveillance	Daniel Chin Shen Li
Prudential Financial Policy	Cindy Siah Hooi Hoon
Consumer and Market Conduct	Lim Hsin Ying
Payment Services Policy	Qaiser Iskandar Anwarudin
Sustainability	Madelena Mohamed
People	Nurashikhin Md. Sharif
Currency Management and Operations	Mohamad Zaini Ab Jabbar
Finance	Toh Ying Ying
LINK and BNM Offices	Thomas Tan Koon Peng
Financial Intelligence and Enforcement	Mohd Fuad Arshad
Chief Services Officer	Affendi Rashdi
Facility Management Services	Razman Samsudin
Hospitality and Museum	Noreen Zulkepli
Organisational Security Management	Ahmad Azaharudin Mohd Anuar
Centralised Procurement	Shum Sook Yi
Chief Information Officer	Tay Gim Soon
Business Technology	Victor Khor Eng Swee
Digital Technology Infrastructure	Ahmad Affzan Mokhtar Anuar
Cyber Security	Aizuddin Mohd Ghazali
Financial Market Infrastructure	Noor Hazama Fadhilah Abdullah
Monetary Stability Sector Administration	Mohd Ridzuan Ahmad Hariri
Financial Sector Administration	Muhamad Zahari Abdul Ghani
Corporate Management Administration	Razip Wan

Effective 1 April 2023

Beijing Representative Office	Soo Woan Chin
London Representative Office	Shahredza Minhat
New York Representative Office	Ahmad Abrar Shamsuddin
BNM Office Pulau Pinang	Hasjun Hashim
BNM Office Johor Bahru	Rosnani Mahamad Zain
BNM Office Kuala Terengganu	Adlis Khairil Sazli Mohd Zaini
BNM Office Kuching	Mohd Irman Haji Mohd Din
BNM Office Kota Kinabalu	Zambre Ismail

Effective 1 April 2023

BANK NEGARA MALAYSIA
Organisation Structure



Effective 1 April 2023

Statutory Committees

In certain areas, the responsibility for decision-making is placed beyond the direct remit of the Board or Management. These matters are reserved for specific organs created by statue.

Monetary Policy Committee

The primary objective of monetary policy in Malaysia is to maintain price stability while giving due regard to developments in the economy. Under the Central Bank of Malaysia Act 2009 (CBA 2009), the Monetary Policy Committee (MPC) of Bank Negara Malaysia is responsible for formulating monetary policy and the policies for the conduct of monetary policy operations.[1] The MPC sets the policy interest rate, the Overnight Policy Rate (OPR), to influence other interest rates in the economy.

In carrying out this mandate, the MPC determines monetary policy based on its assessment of the balance of risks to the outlook for both domestic inflation and growth. The MPC also monitors risks of destabilising financial imbalances given their implications on economic prospects. The MPC meets at least six times a year to decide on the OPR and publishes the Monetary Policy Statement (MPS) after each meeting to explain its decisions.

The MPC comprises the Governor, the Deputy Governors, and not less than three but not more than seven other members. These include external members who are appointed by the Minister of Finance, as recommended by the Bank's Board Governance Committee. The MPC currently has nine members, two of whom are external members. The membership of the MPC seeks to bring together a diversity of expertise and experience that is critical for sound monetary policy decision-making.

Members*

Nor Shamsiah Yunus (Chairperson)

Abdul Rasheed Ghaffour

Jessica Chew Cheng Lian

Marzunisham Omar

Dr. Norhana Endut

Adnan Zaylani Mohamad Zahid

Fraziali Ismail

Nor Zahidi Alias *(External Member)*

Lim Chee Sing *(External Member)*

[1] For a detailed account of the evolution of the MPC and its governance and processes, refer to the box article titled 'Evolution of the Monetary Policy Committee of Bank Negara Malaysia: Key Milestones over the Years' in the Bank's Annual Report 2015.

* As at 29 March 2023.

Financial Stability Executive Committee

The Financial Stability Executive Committee (FSEC) was established in 2010 pursuant to Section 37 of the Central Bank of Malaysia Act 2009 (CBA 2009). The FSEC supports the Bank's statutory mandate of preserving financial stability through its powers to decide on specific policy measures that may be taken by the Bank to avert or reduce risks to financial stability.

In carrying out this mandate, the FSEC reviews, assesses and decides on proposals tabled by the Bank to:
- Issue orders to a person or financial institution that is not regulated nor supervised by the Bank to undertake specific measures in the interest of financial stability;
- Extend liquidity assistance to a financial institution that is not regulated nor supervised by the Bank, or to the overseas operations of a licensed financial institution in Malaysia; and
- Provide capital support to a licensed financial institution in Malaysia that has ceased to be viable or is likely to become non-viable.

This serves to ensure continuous and effective financial intermediation, including the orderly functioning of the money market and foreign exchange market, and preserve public confidence in the financial system.

The FSEC consists of six members, a majority of whom are non-executive members who are independent of the Bank's Management. Members are subject to the FSEC's Code of Ethics and Conflict of Interest, which serves to preserve the integrity of the FSEC's decisions. In 2022, the FSEC met twice to discuss developments and assessments on financial stability risks amid an environment of tightening financial conditions and heightened inflationary pressures globally.

Members*

Tan Sri Nor Shamsiah Yunus (Chairperson)

Datuk Abdul Rasheed Ghaffour

Datuk Johan Mahmood Merican *(Independent non-executive member)*

Dato' Seri Dr. Awang Adek Hussin *(Independent non-executive member)*

Rafiz Azuan Abdullah *(Independent non-executive member)*

Dato' Abdul Rauf Rashid *(Independent non-executive member)*

* As at 29 March 2023.

Shariah Advisory Council

The Shariah Advisory Council of Bank Negara Malaysia (SAC) was established in May 1997 as the highest Shariah authority for Islamic financial institutions in Malaysia. The Central Bank of Malaysia Act 2009 (CBA 2009) reinforces the roles and functions of the SAC as the authority for the ascertainment of Islamic law for the purposes of Islamic financial business which are supervised and regulated by the Bank.

The SAC performs an instrumental role in promoting Shariah certainty and sustaining public confidence in the Islamic financial system. The Shariah rulings by the SAC serve as a main reference for Islamic financial institutions to ensure end-to-end Shariah compliance in their implementation of Islamic financial products, business and activities. In addition, the CBA 2009 provides that Shariah matters brought to the court or raised in any arbitration proceeding must be referred to the SAC for clarity and certainty.

The SAC provides the Shariah basis for the development of a comprehensive Shariah contract-based regulatory framework for Islamic financial institutions in Malaysia. In this regard, the SAC specifies the essential features of the contracts taking into consideration the various Shariah views, research findings, as well as custom and market practices.

The SAC members are appointed by the Yang di-Pertuan Agong, based on the advice of the Minister of Finance after consultation with the Bank. Currently, the SAC has nine members comprising Shariah scholars and practitioners with vast experience, domestically and abroad in the areas of Shariah, law, Islamic economics, and finance.

In 2022, the SAC met seven times to decide and issue rulings that address pressing issues and strengthen long-term developmental impact on the Islamic finance ecosystem in Malaysia.

Members*

Tan Sri Dr. Mohd Daud Bakar (Chairperson)**

Prof. Dr. Ashraf Md Hashim (Chairperson)***

Prof. Dr. Engku Rabiah Adawiah Engku Ali (Deputy Chairperson)***

Sahibus Samahah Dato' Setia Prof. Madya Dr. Haji Anhar Haji Opir

Dato' A. Aziz A. Rahim**

Datuk Seri Mohd Zawawi Salleh

Datuk Prof. Dr. Mohamad Akram Laldin

Dr. Marjan Muhammad

Dr. Ahmad Basri Ibrahim

Burhanuddin Lukman

Zainal Abidin Jamal

* As at 29 March 2023.

** Term ends on 31 October 2022.

*** Effective 25 January 2023.

Monetary Penalty Review Committee

The Monetary Penalty Review Committee (MPRC) is an independent committee legislated under section 238 of the Financial Services Act 2013 (FSA) and section 249 of the Islamic Financial Services Act 2013 (IFSA). The MPRC considers appeals from persons (individuals or institutions) against the administrative monetary penalties or pecuniary remedies imposed by the Bank in exercising its administrative enforcement powers under the FSA, the IFSA and the Development Financial Institutions Act 2002.

The MPRC provides an independent avenue for aggrieved parties to appeal against the Bank's decisions. The MPRC may decide to either confirm the Bank's decision or require the Bank to reconsider and reach a decision in accordance with the findings of the MPRC. The members of MPRC are appointed by the Minister of Finance from among the Independent Non Executive Board Members of the Bank or other external persons upon recommendation by the Bank.

Members*

Tan Sri Hasan Lah (Chairperson)

Prof. Dr. Choong Yeow Choy

Chin Suit Fang

Lillian Leong Bee Lian

* As at 29 March 2023.

Our Finances

Our Finances

Our Finances

The Bank manages its finances with the objective of ensuring that it has the resources to discharge its mandates to promote monetary and financial stability conducive to the sustainable growth of the Malaysian economy. In keeping with these mandates, we are committed to being responsible, prudent and disciplined in managing the nation's resources.

Although we are a statutory body, we do not rely on funds from the Government to support our day-to-day operations. Instead, our operations are funded by income generated from our investments of the country's international reserves. In 2022, we generated a total income of RM8,515 million (2021: RM14,649 million), net of costs associated with managing the international reserves portfolio and conducting monetary operations.

Against this, we incur expenses to manage and administer our operations ("recurring expenditure") and expenses to finance developmental and long term projects in line with our principal objects and functions ("development expenditure"). This includes expenditures incurred for our currency operations and to maintain the country's wholesale payment infrastructure. In 2022, total recurring and development expenditures amounted to RM1,482 million (2021: RM1,814 million).

In 2022, we generated RM6,986 million in net profit after tax (average 2017 – 2021: RM9,389 million). The lower net profit was due to weaker investment returns on the back of significant challenges and volatilities in the international financial market amid aggressive interest rate hikes in advanced economies that led to lower valuations, the military conflict in Ukraine and concerns over prolonged lockdown in China. The lower profit was not unique to Malaysia but also experienced by other central banks.[1] Of the total net profit after tax in 2022, RM4,236 million will be transferred into our Risk Reserve (2021: RM7,796 million was transferred into General Reserve Fund). As the global economy is expected to remain challenging, it is imperative for the Bank to continue to strengthen its Risk Reserve and thus, build buffers against future financial market volatility and economic shocks. The Bank's Risk Reserves to cushion against unexpected losses arising from adverse financial market conditions stood at RM120,846 million or 20% of total assets following the transfer of net profits for the year. The remaining RM2,750 million (2021: RM5,000 million) in net profit will be paid as dividend to the Government.

Our assets, as at 31 December 2022, totalled RM619,038 million (2021: RM551,613 million), with RM503,331 million (2021: RM486,848 million) of international reserves portfolio constituting the bulk (81%) of our assets.

Our liabilities arise mainly from deposits by financial institutions (RM221,886 million) and currency in circulation (RM162,074 million).

[1] https://www.mas.gov.sg/-/media/MAS-Media-Library/publications/annual-report/2022/MAS-Financial-Statement-2021_2022.pdf
https://www.norges-bank.no/en/news-events/news-publications/Reports/Annual-Report/2022-annual-report/content/
https://www.rba.gov.au/publications/annual-reports/rba/2022/pdf/rba-annual-report-2022.pdf
https://www.hkma.gov.hk/eng/news-and-media/press-releases/2023/01/20230130-3/

CERTIFICATE OF THE AUDITOR GENERAL ON THE FINANCIAL STATEMENTS OF BANK NEGARA MALAYSIA FOR THE YEAR ENDED 31 DECEMBER 2022

Certificate on the Audit of the Financial Statements

Opinion

I have audited the Financial Statements of the Bank Negara Malaysia. The financial statements comprise the Statement of Financial Position as at 31 December 2022 of the Bank Negara Malaysia and the Income Statement for the year then ended, and notes to the financial statements, including a summary of significant accounting policies, as set out on pages 193 to 208.

In my opinion, the accompanying financial statements give a true and fair view of the financial position of the Bank Negara Malaysia as at 31 December 2022, and of its financial performance for the year then ended in accordance with the Malaysian Financial Reporting Standards (MFRS) and the Central Bank of Malaysia Act 2009 requirements to the extent that it is, in the opinion of the Board of Directors, appropriate to do so, having regard to the objects and functions of the Bank.

Basis for Opinion

The audit was conducted in accordance with the Audit Act 1957 and the International Standards of Supreme Audit Institutions. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my certificate. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Independence and Other Ethical Responsibilities

I am independent of the Bank Negara Malaysia and I have fulfilled my other ethical responsibilities in accordance with the International Standards of Supreme Audit Institutions.

Information Other than the Financial Statements and Auditor's Certificate Thereon

The Board of Directors of the Bank Negara Malaysia is responsible for the other information in the Annual Report. My opinion on the Financial Statements of the Bank Negara Malaysia does not cover the other information than the financial statements and Auditor's Certificate thereon and I do not express any form of assurance conclusion thereon.

Responsibilities of the Board of Directors for the Financial Statements

The Board of Directors is responsible for the preparation of Financial Statements of the Bank Negara Malaysia that give a true and fair view in accordance with the Malaysian Financial Reporting Standards (MFRS) and the Central Bank of Malaysia Act 2009 requirements to the extent that it is, in the opinion of the Board of Directors, appropriate to do so, having regard to the objects and functions of the Bank. The Board of Directors is also responsible for such internal control as the Board of Directors determines is necessary to enable the preparation of the Financial Statements of the Bank Negara Malaysia that are free from material misstatement, whether due to fraud or error.

In preparing the Financial Statements of the Bank Negara Malaysia, the Board of Directors is responsible for assessing the Bank Negara Malaysia's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the Financial Statements of the Bank Negara Malaysia as a whole are free from material misstatement, whether due to fraud or error, and to issue an Auditor's Certificate that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the International Standards of Supreme Audit Institutions will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the International Standards of Supreme Audit Institutions, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

a. identify and assess the risks of material misstatement of the Financial Statements of the Bank Negara Malaysia, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;

b. obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Bank Negara Malaysia's internal control;

c. evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors;

d. conclude on the appropriateness of the Board of Directors's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Bank Negara Malaysia's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my Auditor's Certificate to the related disclosures in the Financial Statements of the Bank Negara Malaysia or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of Auditor's Certificate; and

e. evaluate the overall presentation, structure and content of the Financial Statements of the Bank Negara Malaysia, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

The Board of Directors has been informed regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I have identify during the audit.

I have also disclosed to the Board of Directors that I have complied with the ethical requirements regarding independence, and communicated with them all relationships and other matters that may reasonably be thought to bear on my independence, and if applicable, actions taken to eliminate threats or safeguards applied.

Other Matters

This certificate is made solely to the Board of Directors of the Bank Negara Malaysia in accordance with the Central Bank of Malaysia Act 2009 requirements, and for no other purpose. I do not assume responsibility to any other person for the content of this certificate.

(PATIMAH BINTI RAMUJI)
ON BEHALF OF AUDITOR GENERAL
MALAYSIA

PUTRAJAYA
13 MARCH 2023

BANK NEGARA MALAYSIA

STATEMENT BY CHAIRPERSON AND ONE OF THE DIRECTORS

We, Nor Shamsiah Yunus and Chin Suit Fang, being the Chairperson and one of the Directors of Bank Negara Malaysia, do hereby state that in the opinion of the Directors, the financial statements are drawn up so as to give a true and fair view of the state of affairs of Bank Negara Malaysia as at 31 December 2022 and the results of operations for the year ended on that date, in accordance with the Central Bank of Malaysia Act 2009 and the applicable Malaysian Financial Reporting Standards (MFRS) to the extent that it is, in the opinion of the Directors, appropriate to do so, having regard to the objects and functions of the Bank.

On behalf of the Board,

NOR SHAMSIAH YUNUS
CHAIRPERSON

24 FEBRUARY 2023
KUALA LUMPUR

On behalf of the Board,

CHIN SUIT FANG
DIRECTOR

24 FEBRUARY 2023
KUALA LUMPUR

BANK NEGARA MALAYSIA

DECLARATION BY THE OFFICER PRIMARILY RESPONSIBLE FOR THE FINANCIAL MANAGEMENT OF BANK NEGARA MALAYSIA

I, Affendi Rashdi, being the officer primarily responsible for the financial management of Bank Negara Malaysia, do solemnly and sincerely declare that the financial statements for the year ended 31 December 2022, are to the best of my knowledge and belief, correct and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the Statutory Declarations Act, 1960.

Subscribed and solemnly declared)
by the abovenamed at Kuala Lumpur)
this 24 February 2023.)

Before me,

PESURUHJAYA SUMPAH
W 703
MOHD FITRY ABDUL GHANI
01/01/2022 - 31/12/2024
MALAYSIA

NO. 58A, JALAN BUKIT RAJA
TAMAN SEPUTEH, 58000 KUALA LUMPUR

BANK NEGARA MALAYSIA

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2022

			2022 RM million	2021 RM million
ASSETS		**Note**		
Gold and Foreign Exchange		3	471,957	455,789
International Monetary Fund Reserve Position		4	6,177	5,950
Holdings of Special Drawing Rights		4	25,197	25,109
Malaysian Government Papers		5	12,822	12,211
Deposits with Financial Institutions		6	2,937	880
Loans and Advances		7	23,694	22,865
Land and Buildings		8	4,142	4,162
Other Assets		9	72,112	24,647
Total Assets			**619,038**	**551,613**
LIABILITIES AND CAPITAL				
Currency in Circulation			162,074	150,065
Deposits from:	Financial Institutions		221,886	159,893
	Federal Government		5,220	8,587
	Others	10	37,292	4,787
Bank Negara Papers		11	6,651	7,911
Allocation of Special Drawing Rights		4	28,213	28,149
Other Liabilities		12	4,399	5,314
Total Liabilities			465,735	364,706
Capital		13	100	100
General Reserve Fund		14	28,888	21,092
Risk Reserve		15	116,610	152,183
Land Revaluation Reserve		16	719	736
Unappropriated Profits		17	6,986	12,796
Total Capital			153,303	186,907
Total Liabilities and Capital			**619,038**	**551,613**

Notes on the following pages form part of these financial statements.

BANK NEGARA MALAYSIA

INCOME STATEMENT FOR THE YEAR ENDED 31 DECEMBER 2022

	Note	2022 RM million	2021 RM million
Total Income	18	**8,515**	**14,649**
Less:			
Recurring Expenditure	19	(1,378)	(1,305)
Development Expenditure	20	(104)	(509)
Total Expenditure		**(1,482)**	**(1,814)**
Net Profit Before Tax		**7,033**	**12,835**
Less: Taxation	21	(47)	(39)
Net Profit After Tax		**6,986**	**12,796**
Unappropriated Profits of the Year	17	**6,986**	**12,796**

Notes on the following pages form part of these financial statements.

BANK NEGARA MALAYSIA

NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED 31 DECEMBER 2022

1. **General Information**
Bank Negara Malaysia (the Bank) is a statutory body established under the Central Bank of Malaysia Act 1958 which has been repealed by the Central Bank of Malaysia Act 2009. The principal place of business is located at Bank Negara Malaysia, Jalan Dato' Onn, 50480 Kuala Lumpur.

The principal objects of the Bank are to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy. In this regard, the Bank's primary functions are as follows:
(a) to formulate and conduct monetary policy in Malaysia;

(b) to issue currency in Malaysia;

(c) to regulate and supervise financial institutions which are subject to the laws enforced by the Bank;

(d) to provide oversight over money and foreign exchange markets;

(e) to exercise oversight over payment systems;

(f) to promote a sound, progressive and inclusive financial system;

(g) to hold and manage the foreign reserves of Malaysia;

(h) to promote an exchange rate regime consistent with the fundamentals of the economy; and

(i) to act as financial adviser, banker and financial agent of the Government.

2. **Accounting Policies**
The principal accounting policies applied in the preparation of these financial statements are set out below. These accounting policies are consistently applied to both of the financial years presented, unless otherwise stated.

2.1 **Basis of Preparation of Financial Statements**
(a) These financial statements have been prepared in accordance with the Central Bank of Malaysia Act 2009 and the applicable Malaysian Financial Reporting Standards (MFRS). Section 10 of the Central Bank of Malaysia Act 2009 provides that the Bank, in preparing its financial statements, shall comply with the applicable accounting standards to the extent that it is, in the opinion of the Directors, appropriate to do so, having regard to the objects and functions of the Bank. The Directors, having considered the Bank's responsibilities for the formulation and conduct of effective monetary policy and for promoting financial stability, are of the opinion that, it is appropriate to differ, in certain aspects, from the applicable accounting standards.

BANK NEGARA MALAYSIA

(b) The preparation of the financial statements on the basis stated in 2.1 (a) requires the management to make judgements, estimates and assumptions based on available information that may affect the application of accounting policies and the reported amounts of assets and liabilities as well as disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of income and expenses during the financial year. Although these estimates are based on the management's best knowledge of current events and actions, the actual results could differ from those estimates.

2.2 **Measurement Base and Accounting Basis**

The financial statements have been prepared on an accrual basis, using the historical cost convention, except as otherwise disclosed.

2.3 **Foreign Currency Translation**

(a) The financial statements have been prepared using Ringgit Malaysia, the currency of the primary economic environment in which the Bank operates.

(b) Assets and liabilities in foreign currencies are translated into Ringgit Malaysia using the exchange rate prevailing as at the end of the financial year. Transactions in foreign currencies during the year are translated into Ringgit Malaysia using the exchange rate prevailing at the transaction dates.

(c) All foreign exchange gains or losses arising from the translation of foreign currency assets and liabilities are recognised in the Risk Reserve while realised gains or losses upon settlement on Other Assets and Other Liabilities are recognised in the Income Statement.

2.4 **Consolidation**

(a) **Subsidiaries**

Subsidiaries are all entities over which the Bank has control. The Bank controls an entity when the Bank is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

(b) **Associates**

Associates are all entities over which the Bank has significant influence but not control, generally accompanying a shareholding of between 20% and 50% of the voting rights.

The Bank does not consolidate the financial performance of its subsidiaries and associates as these entities were established for developmental and financial stability purposes. Investment in subsidiaries and associates are carried at cost and adjusted for any permanent impairment.

2.5 **Gold**

Gold is carried at fair value. Unrealised gains and losses from changes in the fair value on gold are recognised in the Risk Reserve. Realised gains or losses from the sale of gold are recognised in the Income Statement.

2.6 **Foreign Securities**

Foreign securities comprising fixed income securities and equities are stated at fair value. Fair value changes are recognised in the Risk Reserve or in the Income Statement. Upon derecognition, realised gains or losses are recognised in the Income Statement.

BANK NEGARA MALAYSIA

2.7 **Net Profit**
The net profit of the Bank is appropriated in accordance with section 7 of the Central Bank of Malaysia Act 2009 and only realised gains are available for distribution to the Bank's shareholder.

2.8 **Repurchase and Reverse Repurchase Agreements**
The amount under repurchase agreements is reported under Other Liabilities and the difference between the sale and repurchase price is recognised as interest expense in the Income Statement. Conversely, the amount under reverse repurchase agreements is reported under Other Assets and the difference between purchase and resale price is recognised as interest income in the Income Statement.

2.9 **Land and Buildings**
(a) The Bank capitalises all its land while buildings are maintained at nominal cost of RM10 each.

(b) The amount of land capitalised at initial recognition is the purchase price along with any further costs incurred in bringing the land to its present condition.

(c) After initial recognition, land is stated at revalued amount. Professional valuations of the Bank's land will be carried out once every 10 years with any surplus arising on revaluation to be recognised directly in the Land Revaluation Reserve.

(d) Freehold land is not depreciated while leasehold land is amortised over its remaining life. Land (freehold and leasehold) is revalued once in 10 years and fair value is determined from market based evidence undertaken by professionally qualified valuer. Buildings are not depreciated but revalued to a nominal value in the year of acquisition.

(e) Any gain or loss arising from the disposal of land is determined as the difference between the net disposal proceeds and the carrying amount of the land. Upon disposal of land, any surplus previously recorded in the Land Revaluation Reserve is transferred to Unappropriated Profit.

2.10 **Other Fixed Assets**
All other fixed assets are completely written-off in the year of acquisition.

2.11 **Impairment of Assets**
All assets are periodically assessed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If such an indication exists, an impairment review is performed to assess whether the carrying amount of the asset is fully recoverable.

2.12 **Currency in Circulation**
Currency in circulation represents banknotes and coins that have been produced and issued by the Bank for use in the economy. Banknotes and coins are recognised in the Statement of Financial Position at face value when they are placed into circulation and derecognised when they are withdrawn from circulation. Expenses incurred in the purchase and production of banknotes and coins are recognised in the Income Statement.

BANK NEGARA MALAYSIA

3. **Gold and Foreign Exchange**

	2022 RM million	2021 RM million
Gold	9,912	9,370
Foreign Securities	351,575	406,914
Foreign Deposits	2,775	3,549
Balances with Other Central Banks	95,988	22,886
Others	11,707	13,070
	471,957	455,789

4. **International Monetary Fund (IMF) Reserve Position, Holdings of Special Drawing Rights (SDR) and Allocation of Special Drawing Rights (SDR)**

The IMF objectives are to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth and reduce poverty around the world. The IMF also provides advice and temporary funding to member countries in the event of balance of payments difficulties.

IMF Reserve Position

This consists of the reserve tranche position of Malaysia's quota, lending under the IMF's Financial Transaction Plan (FTP) and New Arrangements to Borrow (NAB). The IMF quota determines a member country's voting strength, the financial contributions to the IMF, the amount of financing the member can access in the event of balance of payment difficulties and the amount of SDRs allocated to the member. Both FTP and NAB programmes are used to provide loans to members.

Holdings of Special Drawing Rights (SDR)

Holdings of Special Drawing Rights (SDR) are an international reserve asset created by the IMF. SDR is periodically allocated to IMF member countries on the basis of the size of member countries' quota. A member may use SDR to obtain foreign exchange reserves from other members and to make international payments, including to the IMF.

Allocation of Special Drawing Rights (SDR)

This liability to the IMF represents an equivalent amount of SDR received since its inception.

	2022 RM million	2021 RM million
IMF Reserve Position	6,177	5,950
Holdings of Special Drawing Rights (SDR)	25,197	25,109
Allocation of Special Drawing Rights (SDR)	(28,213)	(28,149)
Net position with IMF	3,161	2,910

BANK NEGARA MALAYSIA

5. **Malaysian Government Papers**

Malaysian Government Papers refer to holdings of Government debt instruments that are among the instruments that can be used in the Bank's monetary policy operations.

	2022 RM million	2021 RM million
Malaysian Government Securities	11,364	10,770
Malaysian Government Investment Certificates	1,458	1,441
	12,822	12,211

6. **Deposits with Financial Institutions**

Deposits with financial institutions comprise deposits placed by the Bank with financial institutions under section 75(i) and section 100 of the Central Bank of Malaysia Act 2009.

7. **Loans and Advances**

Loans and advances comprise advances extended by the Bank to participating financial institutions under various schemes aimed at achieving greater financial inclusion, development of small and medium-sized enterprises (SME) and to support SMEs affected by COVID-19 pandemic. The extensions of these advances are provided under section 48, section 49 and section 100 of the Central Bank of Malaysia Act 2009.

	2022 RM million	2021 RM million
BNM's Fund for SMEs		
Fund to promote growth and development for SME	3,787	4,583
Special Relief Facility for SME affected by COVID-19	17,658	16,183
PENJANA Tourism and Automation & Digitalisation Financing for SME	941	786
Fund for Affordable Homes	1,000	1,000
Others	308	313
	23,694	22,865

8. **Land and Buildings**

	2022 RM million	2021 RM million
Land, at cost		
Freehold	3,318	3,318
Land, at revaluation		
Freehold	694	694
Leasehold	130	150
	4,142	4,162

BANK NEGARA MALAYSIA

	2022 RM million	2021 RM million
Leasehold land		
As at 1 January	150	152
Less: Sale during the year	(18)	-
Accumulated Amortisation	(2)	(2)
As at 31 December	130	150

	2022 RM	2021 RM
Buildings, at nominal value		
Freehold	2,240	2,240
Leasehold	1,360	1,370
	3,600	3,610

Freehold and leasehold land, at revaluation, were revalued by an independent valuer on 1 August 2014.

9. **Other Assets**

Included in Other Assets are securities purchased under reverse repurchase agreements and investments in shares and bonds acquired under section 48(1) and section 100 of the Central Bank of Malaysia Act 2009.

	2022 RM million	2021 RM million
Reverse Repurchase Agreements	65,511	19,702
Investments in Shares and Bonds	4,390	4,390
Others	2,211	555
	72,112	24,647

	2022 RM million	2021 RM million
Investment in Shares and Bonds		
Subsidiaries	4,257	4,257
Associates	38	38
Other Investments	95	95
	4,390	4,390

BANK NEGARA MALAYSIA

10. **Deposits from Others**
A substantial part of these deposits comprises deposits from national institutions, government agencies and public authorities.

11. **Bank Negara Papers**
Bank Negara Papers are papers issued by the Bank as an additional monetary policy tool to manage liquidity in the domestic money market. It also includes Bank Negara Interbank Bills (BNIB) in foreign currency and this is part of the Bank's market operations to manage foreign currency liquidity in the domestic money market.

12. **Other Liabilities**
Other Liabilities include securities sold under repurchase agreements of RM2,316 million (2021: RM3,152 million).

	2022 RM million	**2021 RM million**
Repurchase Agreements	2,316	3,152
Accruals	1,704	1,614
Others	379	548
	4,399	5,314

13. **Capital**
In accordance with section 6 of the Central Bank of Malaysia Act 2009, the capital of the Bank is RM100,000,000 and owned by the Government of Malaysia.

14. **General Reserve Fund**

	2022 RM million	**2021 RM million**
As at 1 January	21,092	14,857
Amount approved and transferred to the General Reserve Fund during the year	7,796	6,235
As at 31 December	28,888	21,092

Appropriations of net profits to the General Reserve Fund and dividends to the Government are recognised upon the approval by the Board and the Minister as provided under section 7 of the Central Bank of Malaysia Act 2009.

The transfer to the General Reserve Fund for the year ended 2021 of RM7.796 billion was approved by the Minister on 4 March 2022.

15. **Risk Reserve**
The Risk Reserve are financial buffers comprising cumulative transfers of net profits, unrealised gains or losses on translation of foreign currency assets and liabilities and fair value changes from securities carried at fair value.

BANK NEGARA MALAYSIA

A market risk measurement framework is used to estimate financial buffers required to cushion unexpected loss arising from unfavourable circumstances not within the control of the Bank.

	2022 RM million	2021 RM million
As at 1 January	152,183	144,746
Movements during the year	(35,573)	7,437
As at 31 December	116,610	152,183

16. **Land Revaluation Reserve**
The Land Revaluation Reserve relates to unrealised surplus of land (freehold and leasehold) upon their revaluation. Upon disposal, the realised surplus relating to the realised asset is transferred to Unappropriated Profits.

17. **Unappropriated Profits**

	2022 RM million	2021 RM million
Balance 1 January	12,796	10,235
Less: Appropriations approved during the year		
Transfer to General Reserve Fund	(7,796)	(6,235)
Dividend paid to the Government	(5,000)	(4,000)
	-	-
Current year's unappropriated profits	6,986	12,796
Balance 31 December	6,986	12,796

In accordance with section 7 of the Central Bank of Malaysia Act 2009, appropriations to the General Reserve Fund and the declaration of dividends to the Government are subject to the approval by the Board and the Minister, and if approved will be recognised in the next financial year ending 31 December 2023.

The dividend paid to the Government for the year ended 2021 amounted to RM5.0 billion was approved by the Minister on 4 March 2022.

For the year ended 31 December 2022, the Board of Directors approved the transfer to the risk reserve of RM4.236 billion and recommends dividend payable of RM2.75 billion to the Government.

BANK NEGARA MALAYSIA

18. Total Income

		2022 RM million	2021 RM million
Operating Income	(a)	8,303	14,084
Loans and Advances Income	(b)	43	64
Other Income	(c)	169	501
		8,515	14,649

(a) **Operating Income**
Operating income comprises of revenue from foreign reserves which includes interest and dividends, realised capital gains or losses and is stated at net of amortisation/accretion of premiums/discounts, provisions and monetary policy cost.

(b) **Loans and Advances Income**

	2022 RM million	2021 RM million
BNM's Fund for SMEs	26	47
Fund for Affordable Homes	10	10
Others	7	7
	43	64

(c) **Other Income**
Included in other income are incomes from currency processing charges, sales of commemorative banknotes and coins as well as other non-recurring income. In 2021, there was a one off writeback of RM440 million.

19. Recurring Expenditure

		2022 RM million	2021 RM million
Staff Costs	(a)	(708)	(666)
Currency Operations	(b)	(223)	(216)
Information Technology	(c)	(130)	(124)
Utilities and Maintenance	(d)	(108)	(95)
General and Administrative	(e)	(209)	(204)
		(1,378)	(1,305)

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(a) **Staff Costs**
Staff costs include salaries, allowances, staff medical costs and employer statutory contributions.

(b) **Currency Operations**
Currency operations comprise of expenditure incurred directly and indirectly in issuing currency banknotes and coins.

(c) **Information Technology**
Information technology are expenditures incurred to maintain IT infrastructure and equipment including renewal of licences and purchase of IT consumables.

(d) **Utilities and Maintenance**
Included in utilities and maintenance are expenditures relating to the upkeep of the Bank's office buildings and other premises.

(e) **General and Administrative**
General and administrative are expenditure incurred in the administration of the Bank's day-to-day operations.

20. **Development Expenditure**
Development expenditure are other expenditures which are not part of recurring expenditure incurred mainly to finance developmental and long-term projects undertaken by the Bank that are in line with its principal objects and functions.

21. **Taxation**
The Bank is exempted from payment of income tax and supplementary income tax as set out in the Income Tax (Exemption) (No. 7) Order 1989. Tax expenses relates to unclaimable withholding taxes on income from foreign dividend and interest and capital gains taxes on sale of foreign investments.

22. **Contingencies and Commitments**

22.1 **Contingent Assets**
Total contingent assets as at 31 December 2022 amounted to RM1,840 million. These comprise the Bank's total funding to the International Centre for Leadership in Finance (ICLIF) Trust Fund of RM1,000 million and International Centre for Education in Islamic Finance (INCEIF) Trust Fund of RM840 million to finance activities related to training, research and development of human resource in banking and financial services managed by Asia School of Business (ASB) and INCEIF, respectively. It is provided in the Trust Deeds that the total funding will be returned to the Bank when these Centres become self-sufficient in the future.

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22.2 **Commitments**

Total commitments as at 31 December 2022 comprise the following:

	Note	2022 RM million	2021 RM million
Total Commitments			
Membership with International Monetary Fund (IMF)	(a)		
Unpaid Quota	(i)	15,179	15,547
New Arrangement to Borrow (NAB)	(ii)	3,954	3,918
Bilateral Borrowing Agreement (BBA)	(iii)	1,892	1,795
Investment with Bank for International Settlements (BIS)	(b)	71	70
Swap Arrangements	(c)		
Bilateral Currency Swap Arrangement with			
People's Bank of China (PBOC)	(i)(a)	76,143	105,584
Bank of Korea (BOK)	(i)(b)	15,000	15,000
Bank Indonesia (BI)	(i)(c)	5,300	8,000
Bank of Japan (BOJ)	(i)(d)	13,170	12,495
Chiang Mai Initiative Multilateralisation	(ii)	39,967	37,918
Repurchase Agreement with EMEAP Members	(iii)	21,950	20,825
		192,626	221,152

(a) **Membership with IMF**

(i) The Bank has an obligation to pay to IMF SDR2,598 million, equivalent to RM15,179 million (2021: SDR2,667 million, equivalent to RM15,547 million) or in other convertible currencies which represents the unpaid portion of Malaysia's quota in the IMF under the Articles of Agreement.

(ii) The Bank has participated in the New Arrangements to Borrow (NAB), a multilateral credit arrangement between the IMF and its member countries to provide a supplementary source of financing to IMF for the purpose of safeguarding the stability of the international monetary system. As at 31 December 2022, the amount of undrawn credit under the NAB is SDR677 million, equivalent to RM3,954 million (2021: SDR672 million, equivalent to RM3,918 million).

(iii) The Bank has participated in the Bilateral Borrowing Agreement (BBA), which involves bilateral contribution to the IMF for precautionary and financial crisis resolution purposes. The Bank has pledged a USD431 million, equivalent to RM1,892 million (2021: USD431 million, equivalent to RM1,795 million) bilateral contribution to the IMF for precautionary and financial crisis resolution purposes effective 1 January 2021.

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(b) **Investment with the Bank for International Settlements (BIS)**
The Bank has a commitment of SDR12 million, equivalent to RM71 million (2021: SDR12 million, equivalent to RM70 million) which refers to the uncalled portion of the 3,220 units of shares held by the Bank in the BIS based on the nominal value of SDR5,000 each using the SDR rate at the date of the Statement of Financial Position.

(c) **Swap Arrangements**
(i) **Bilateral Currency Swap Arrangement**
(a) On 23 November 2021, the Bank renewed the Bilateral Currency Swap Arrangement (BCSA) agreement with the People's Bank of China (PBOC) with the objective of promoting and facilitating trade settlement in the local currency between the two countries and preserving regional financial stability. As at 31 December 2022, the Bank's total outstanding commitment under the BCSA is RM76.1 billion (2021: RM105.6 billion).

(b) On 3 February 2020, the Bank renewed the Bilateral Currency Swap Arrangement (BCSA) agreement with the Bank of Korea (BOK) with the objective of promoting bilateral trade and facilitating trade settlement in local currency between the two countries. As at 31 December 2022, the Bank's total commitment under the BCSA is RM15 billion (2021: RM15 billion) and there has been no request to activate the BCSA during the financial year.

(c) On 27 September 2019, the Bank signed Local Currency Bilateral Swap Arrangement (LCBSA) agreement with the Bank Indonesia (BI) with the objective of promoting bilateral trade and facilitating trade settlement in local currency between the two countries. As at 31 December 2022, the Bank's total commitment under the LCBSA is RM5.3 billion (2021: RM8 billion).

(d) On 18 September 2020, the Bank signed a Bilateral Swap Arrangement (BSA) agreement with the Bank of Japan (BOJ). This BSA enables both authorities to swap their local currencies for US Dollar and the arrangement will provide up to USD3 billion for both countries. As at 31 December 2022, the Bank's total commitment under the BSA is RM13.2 billion (2021: RM12.5 billion) and there has been no request to activate the BSA during the financial year.

(ii) **Chiang Mai Initiative Multilateralisation Arrangement**
The Bank has participated in the Chiang Mai Initiative Multilateralisation (CMIM) arrangement to provide financial support to ASEAN+3 member countries facing balance of payments and short-term liquidity difficulties. The effective date of the CMIM Agreement is 24 March 2010. Under the CMIM arrangement, member countries facing balance of payments and short-term liquidity constraints can obtain financial support in US Dollar through swap arrangements against their respective local currencies. As at 31 December 2022, the Bank's total commitment is USD9.1 billion, equivalent to RM40.0 billion (2021: USD9.1 billion, equivalent to RM37.9 billion) and there has been no request for liquidity support from any member country.

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(iii) **Repurchase Agreement with Central Banks and Monetary Authorities**
The Bank entered into repurchase agreements totalling USD5 billion, equivalent to RM22.0 billion (2021: USD5 billion, equivalent to RM20.8 billion) with various central banks and monetary authorities under the Executives' Meeting of East Asia-Pacific Central Banks (EMEAP) to provide liquidity assistance in times of emergency. As at 31 December 2022, there has been no request for liquidity assistance from any counterpart.

23. **Financial Risk Management**
The Reserve Management Committee oversees the assessment, measurement and the control of the investment risks in the management of reserves to be within acceptable levels to ensure that the objectives of capital preservation, liquidity and reasonable returns are met. In undertaking this function, the major risks of the investments fall into the following areas:

(a) **Market Risk**
Market risk is the exposure of the Bank's investments to adverse movements in market prices related to foreign exchange rates, interest rates and prices of bonds and equities. Market risk is assessed and monitored on a daily basis. A benchmark policy approved by the Board of Directors reflects the long-term objectives and acceptable risk-return profile of the investments. Investments may be made in instruments that are different from those in the benchmark. This deviation in investment is controlled through a set of risk management limits, governance arrangements and investment guidelines that are also approved by the Board of Directors. Sensitivity analysis and stress testing are undertaken to assess emerging risks and potential marked-to-market losses from adverse movements and volatility in the market, as well as liquidity conditions.

(b) **Credit Risk**
Credit risk is the risk of default of the issuer of the debt or failure of the counterparty to perform its contractual obligation to the Bank resulting in the Bank not receiving its principal and/or interest that has fallen due in a timely manner. A comprehensive credit risk framework governs the permissible investments and the risk appetite of the Bank, thus ensuring investments in issuers and with counterparties of good credit standing. The framework, which is approved by the Board, also incorporates market-based credit indicators such as ratings implied from financial market prices, and internal credit assessment. This enhances the credit risk framework by providing a more dynamic and forward-looking credit assessment.

(c) **Operational Risk**
Operational risk is the risk of financial losses due to failed internal processes, inadequate controls and procedures, or any other internal or external events that impede operations. Operational risk is mitigated through a risk governance framework and effective implementation of risk controls and limits. A comprehensive operational risk surveillance mechanism is in place to support the identification of emerging risks in the Bank's operations to allow for action to be taken in managing gaps and in mitigating financial losses.

24. **Bank Negara Malaysia Staff Welfare Account (Medical Fund) (termed as the 'Medical Fund Account')**
The Medical Fund Account was established on 21 June 2006 under section 15 (6) of the Central Bank of Malaysia Act 1958 and continue to exist under section 83 (4) and (5) of the Central Bank of Malaysia Act 2009.

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The Medical Fund Account is governed under the Bank Negara Malaysia Staff Welfare Account (Medical Fund) Trust Directions 2006 and Supplementary Trust Directions 2017. The objective is to assist the Bank to meet the medical expenses of eligible retirees and their dependents. As stipulated in the Bank Negara Malaysia Staff Welfare Account (Medical Fund) Trust Directions 2006, the Medical Fund shall be administered by a Medical Fund Committee. The Medical Fund Account is to be maintained separately and shall be audited in the same manner as the Bank's Account.

25. **Related Party Transactions and Balances**

Government of Malaysia

The Bank is related to the Government in terms of ownership. The Bank funds its own operations and maintains organisational and functional independence from the Government. The Bank also acts as financial adviser, banker and financial agent to the Government. In the normal course of its operations, the Bank enters into transactions with related parties and significant balances are presented in these financial statements.

Significant Related Party Balances

	2022 RM million	2021 RM million
Shareholder		
Government of Malaysia:		
Holdings of Malaysian Government Papers	12,822	12,211
Deposit placements from the Government	5,220	8,587

26. **Comparatives Figures**

Certain comparative figures have been restated to conform with the current year's presentation. The effects of these changes on the comparative figures are as follows:

Income Statement

	Note	As previously stated RM million	Reclassification RM million	As restated RM million
Total Income	(a)	14,727	(78)	14,649
Development Expenditure	(a)	(587)	78	(509)
Total Expenditure	(a)	(1,892)	78	(1,814)

Note:

(a) Reclassification of provision for foreign securities from Development Expenditure into Operating Income.

27. **Approval of Financial Statements**

The Board of Directors approved the annual financial statements on 24 February 2023.