How has financial market development affected monetary policy and financial stability in EMEs: the Malaysian experience

Bank Negara Malaysia

Abstract

This paper examines the drivers behind financial market development and the implications for monetary policy and financial stability, from the Malaysian experience. The paper reviews the financial market landscape over the past two major crises and how policy responses have shaped financial market development and its impact on monetary policy transmission and financial stability.

JEL classification: E44, E52, E58, E61, F31, G12, G23.

Keywords: market development, financial market, spillovers, financial stability, offshore derivatives, surveillance.

Financial markets in EMEs – the last two decades

Main drivers of financial market development (FMD)

Financial market development in Malaysia after the Asian financial crisis (AFC) was driven mainly by the need to develop an efficient local currency bond market, thus making the economy less dependent on the banking system for credit intermediation. In 1996, pre-AFC, bank loans accounted for 81% of financing to Malaysian corporates, while corporate bonds made up the remainder, resulting in a significant concentration of risks in the banking sector.

Providing an alternative to domestic bank lending would foster resilience of the financial system to external shocks, as seen in the case of Australia during the AFC. Complementing the development of the domestic bond market, short-term funding markets and the foreign exchange markets were further enhanced to address potential risks from currency mismatches and increase the availability of hedging instruments to manage interest rates and FX exposures. Developments in these markets were designed to provide a competitive source of financing across a wide range of tenors as well as fulfilling the investment needs of a diverse set of investors.

Pre-AFC, the repo and derivatives markets were non-existent, resulting in a lack of avenues for market participants to hedge their positions. This was compounded by an illiquid secondary bond market due to the presence of large and less diversified institutional investors, which, at the time, usually held bonds to maturity. Moreover, market conventions and risk management practices were highly varied and inconsistent due to the lack of standardised guidelines and documentation.

Recognising that liquid secondary markets are key building blocks for a market-driven financial system, the repo and derivative markets were targeted for development. This has led the Central Bank of Malaysia (BNM) to publish official guidelines on repo and short-selling to promote best practices through the adoption of the Global Master Repurchase Agreement (GMRA). It has also encouraged the introduction of the Institutional Securities Custodian Programme (ISCAP) to release captive holdings of bonds via repo to market participants. Continuous growth of the domestic financial markets has positioned Malaysia among the more developed markets in Asia, with the third largest markets after Japan and Korea and the largest in Southeast Asia.

However, increased foreign participation in the domestic financial markets is not without its risks and trade-offs. The Great Financial Crisis (GFC) underlined the role played by international capital flows from a financial stability perspective.[1] Capital flows can exacerbate two main features of the financial system, namely the importance of system-wide linkages and the procyclicality of systemic risk. Subsequent financial market development initiatives arise from the need to manage global spillovers to domestic financial market stability.

[1] "Assessing international capital flows after the Great Financial Crisis of 2007–09", *IFC Bulletin*, February 2017.

FMD has benefited the Malaysian financial market

In the wake of these financial market development initiatives, the Malaysian financial market experienced significant growth. The domestic bond market has grown to RM 1.4 trillion or 104% of GDP as at end-2018 from just RM 264 billion or 74% of GDP in 2000. Malaysia also has one of the largest sukuk markets in the world. The country's deep capital markets have allowed it to be a proxy for capital markets in emerging markets in Asia.

Liquidity in the bond market has continued to increase, recording an average daily bond trading volume of RM 3.2 billion in 2018 compared with RM 1.5 billion in 2000. In line with these developments, the bond market has also attracted more diverse investors, with foreign holdings of Malaysian government securities increasing to 22.7% of outstanding as at end-2018 from less than 1% in 2000.

Greater liquidity in the bond and sukuk markets from capital inflows has supported further growth in the FX market, while greater foreign investor participation has led to development of the FX derivatives segment to meet increasingly sophisticated investor needs. The Malaysian FX market has grown significantly in the past two decades, from a daily average interbank FX volume, the largest segment of total FX volume being traded, of just USD 15.6 million in 2000 to a total average daily FX volume of USD11.5 billion in 2018.

The growth in bond market activities also serves as an impetus to further development of the domestic interest rate swap (IRS) market. Growth in interest rate derivatives has helped market participants to improve the efficiency of their risk management. Insurers have also benefited from a deeper financial market, in that the availability of a wider spectrum of bonds has facilitated closer asset-liability matching for them. The growth of a sustainable insurance industry allows for the effective mobilisation of long-term savings to support economic growth.

The impact of FMD on monetary policy

Monetary policy implementation and transmission remains potent

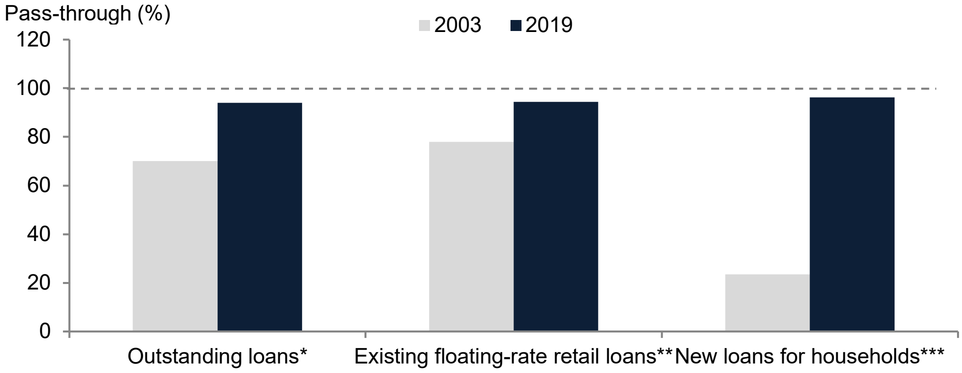
The focus on developing financial infrastructures since the AFC also facilitated the BNM's transition to a market-based interest rate targeting framework in 2004. The framework introduced the Overnight Policy Rate (OPR) as the target for the average overnight interbank rate (AOIR). The AOIR acts as the benchmark for short-term interbank money market rates, which in turn influences the funding costs of banks and prices and returns in the financial markets, thereby enhancing monetary policy transmission.

The transition to the new framework was well timed given the favourable economic and financial environment, sufficiently developed infrastructure and the proliferation of structured financial products. The framework was designed to enhance the effectiveness of monetary policy by facilitating the transmission of changes in the policy rate (Overnight Policy Rate) to the other market rates and ultimately to key macroeconomic objectives. Under this framework, a wider range of instruments including central bank securities, repo and foreign exchange (FX) swaps, are used in monetary operations to manage the banking system liquidity to achieve the operating target.

The pass-through of adjustments in the policy rate to retail lending rates has become progressively stronger. This is in some measure, due to the increasing use of financial market rates as benchmarks for pricing of loans, such as the three-month Kuala Lumpur Interbank Offered Rate (KLIBOR) as these rates tend to adjust quickly and strongly to changes in OPR. In addition, the introduction of the Base Rate (BR) in 2015, replacing the Base Lending Rate (BLR) as the reference rate for retail floating rate loans also enhanced monetary policy transmission, given that the BR is intended to reflect fluctuations in banks' cost of funds stemming from changes in monetary policy.

Pass-through of reductions in OPR to lending rates

Chart 1



Note: Pass-through in rates was calculated as the average over six months before and after the policy rate change. For the reduction in the OPR in May-19, the average rate after the OPR reduction was taken over five months given data availability.

*For 2003, the pass-through is based on the average lending rate on outstanding loans by commercial banks. For 2019, the pass-through is based on the rate weighted by the share of outstanding loans of commercial banks.

**For 2003, the pass-through is based on the average Base Lending Rate (BLR) of commercial banks, while for 2019, it is based on the weighted average Base Rate (BR), weighted by the share of floating-rate loans of commercial banks.

***Based on the weighted average lending rate on new loans approved for households, with fixed weights based on long-run average share of new loans approved by loan purpose.

Source: Central Bank of Malaysia.

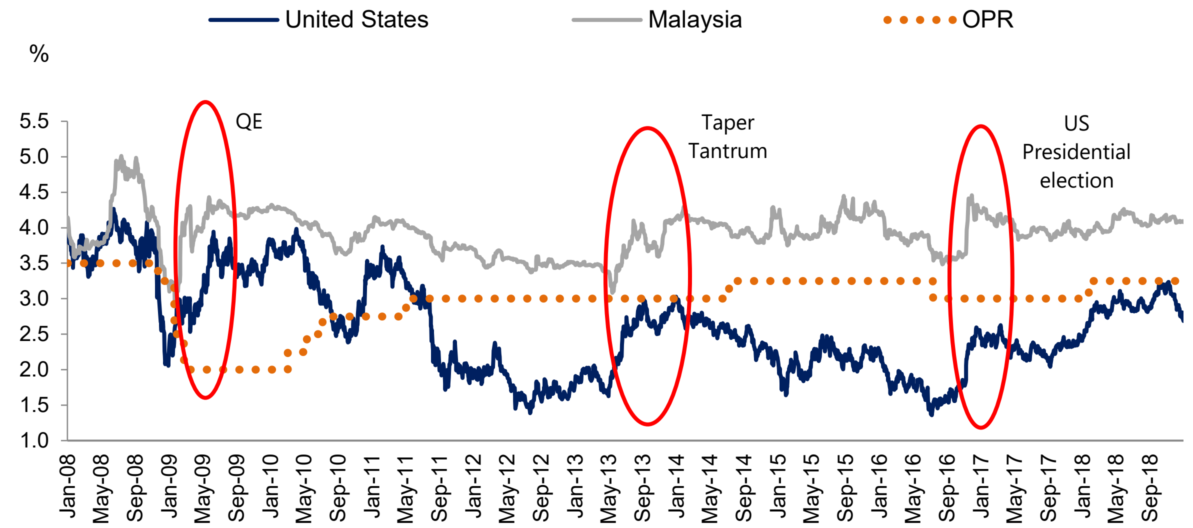
As the Malaysian financial market became more accessible to a wider spectrum of investors, Malaysia attracted increased capital inflows. These have led to additional domestic liquidity, and new monetary instruments were introduced to absorb surplus liquidity on a longer-term basis. In December 2006, the BNM introduced Bank Negara Monetary Notes (BNMNs) to increase efficiency in absorbing surplus liquidity. The total outstanding of BNMNs peaked at RM154 billion in 2012 following the adoption of quantitative easing (QE) in the advanced economies. However, the use of BNMNs has subsequently declined significantly due to the outflows arising from QE reversal and monetary policy normalisation. In November 2017, Bank Negara Interbank Bills were introduced to expand the capacity of the interbank market to intermediate liquidity, complementing the central bank's monetary operations. These tradable interbank bills provide banking institutions with an additional avenue to better manage their ringgit liquidity and interest rate exposures besides qualifying as high-quality liquid assets (HQLA) under the Liquidity Coverage Ratio (LCR) requirements.

Global spillovers may have impacted monetary policy autonomy

While the Malaysian economy has benefited from a more developed and open financial market, an increasingly globalised investor base has posed risks and trade-offs that have to be managed. Higher non-resident participation has led to greater procyclicality between the domestic debt market and the global financial cycle.[2] This may present challenges to the conduct of monetary policy. Global monetary spillovers transmitted via non-resident capital flows have led to stronger co-movement between domestic long-term bond yields with those in advanced economies such as the United States. There have been instances where the movement of the 10-year MGS yields trended more closely with movements in the 10-year US Treasury yield, even when there were no changes in the OPR, altering domestic financial conditions. This phenomenon is common among EMEs with more developed financial markets and large non-resident participation.

Movement of 10-year government bond yields

Chart 2



Source: Bloomberg.

Nevertheless, these developments do not substantially weaken the effectiveness of the monetary policy transmission mechanism for Malaysia, as bank-based credit still forms a large part of financing for the economy. Banks' retail lending rates are priced predominantly off money market rates instead of MGS yields. In this respect, the monetary policy transmission mechanism in Malaysia remains effective.

[2] "Assessing international capital flows after the Great Financial Crisis of 2007–09", *IFC Bulletin*, February 2017.

Monetary policy communication to provide clarity

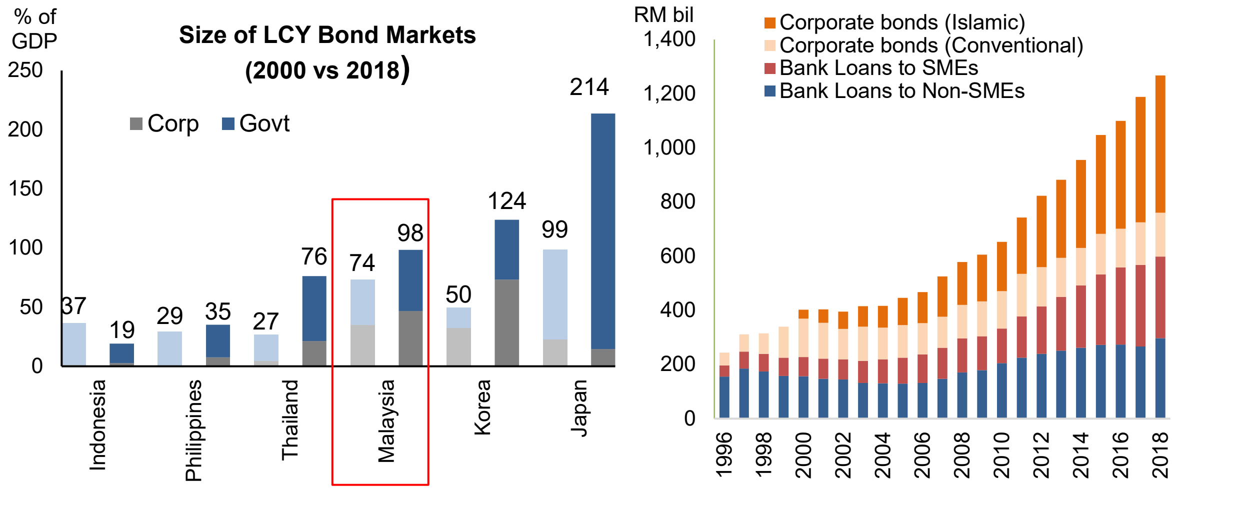
The BNM has also placed greater emphasis on providing clarity on the outlook affecting the balance of risks to growth and inflation as the domestic financial markets become more exposed to large non-resident capital flows and periods of volatility. Managing expectations on this front has become an essential part of the central bank's communication strategy. This is particularly the case for the narrative on the factors underpinning the central bank's assessment on the outlook in the Monetary Policy Statement (MPS) in order to better anchor expectations. However, the OPR remains the sole indicator for signalling the monetary policy stance.

The impact of FMD on financial stability

FMD has improved banking system stability

Developments in the bond market have led to a rise in corporate bond and sukuk issuances, reducing the concentration of bank-based financing to the corporate sector. Corporate bonds and sukuk outstanding have over time grown to be marginally larger than bank-based financing to businesses (end-2018, bonds: 46% of GDP vs loans: 41% of GDP). The development of the debt market has also allowed for the diversification of bank-based lending down the value chain, particularly towards supporting the financing needs of SMEs. This allows the risks from large corporate credit to be distributed rather than be concentrated solely within the banking system.

Growth in corporate bond market reduced concentration of bank-based financing   Chart 3



Sources: Central Bank of Malaysia, Asian Bonds Online.

FMD has fostered growth in non-bank financial institutions rather than in shadow banking

The developments in the financial markets have played a role in the expansion of non-bank financial institutions (NBFIs). The bond market provides an avenue for cheaper financing options for non-bank credit intermediaries such as credit or leasing businesses, spurring growth in their domestic lending activities. Most of these NBFIs are either regulated or subject to some form of oversight by various government ministries. Their services expand beyond those provided by banks, providing households with further avenues to diversify financial wealth besides supporting credit intermediation.

FMD has improved Malaysia's external position

With greater depth and breadth in the domestic financial markets, domestic entities and the government are able to efficiently tap into domestic market liquidity to raise financing. Prudent risk management by financial institutions and limited risks from external borrowings of Malaysian corporates have also contained potential market risk exposures at manageable levels. Moreover, reflecting the progressive liberalisation of Malaysia's foreign exchange administration rules and the decentralisation of international reserves, Malaysian entities have accumulated significant external assets abroad. Against a potential shock and sharp ringgit depreciation, external assets will increase more than the rise in external liabilities, enhancing the external position from a balance sheet perspective.

FMD have amplified global spillovers to domestic financial markets

The development of international finance has multiplied channels that could transmit contagion effects of a systemic nature. One view is thus that the development of financial liberalisation and globalisation has been instrumental in generating "excess financial elasticity" in the global system. The degree of procyclicality or the system's elasticity hinges on domestic policy regimes and their evolution has increased it. The interaction of financial regimes, through the free mobility of capital across currencies and borders reinforces and channels these effects.[3]

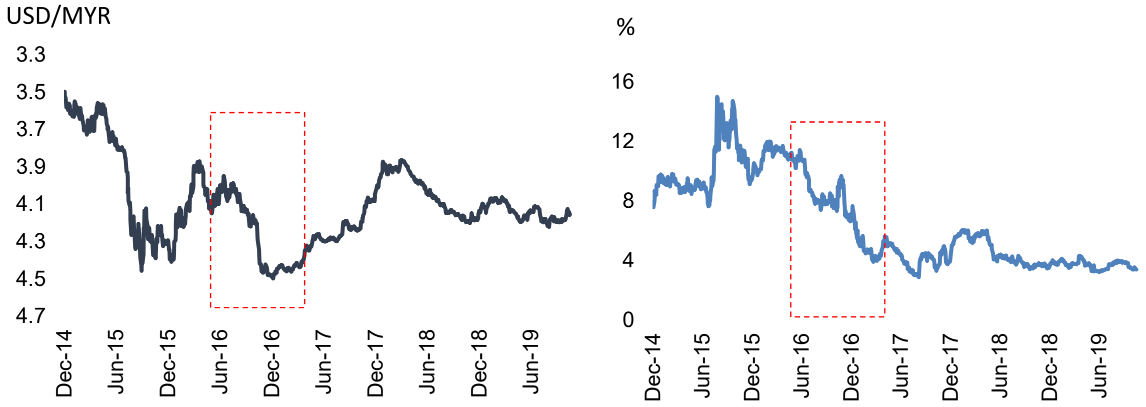
One way this could manifest itself is via the domestic financial markets. Risks to the orderly functioning of the domestic financial markets with implications for financial stability were observed when large capital inflows suddenly reversed during the GFC and contributed to volatility spikes in exchange rates. A similar trend was also observed during periods coinciding with US quantitative easing and more recently the US presidential election. To illustrate the impact of global spillovers to the domestic financial market, non-resident holdings of Malaysian government bonds reached a peak of 34.7% prior to the US presidential election in November 2016 and declined sharply to 24.7% over a short period of four months. These abrupt and disruptive flows, particularly from speculative investors, have exacerbated volatility during periods of market stress, affecting bond yields and the foreign exchange market.

[3] BIS, *85th Annual Report*, 2015

The offshore derivatives market has exacerbated volatility in the onshore FX market

The hedging markets are often used for leveraged position-taking based on expectations for future movements in the underlying asset. The role of offshore trading has been increasing over the last 15 years.[4] The impact of spillovers from offshore markets poses a significant risk to the ability of the domestic market to effectively intermediate capital flows. With an increasingly liberalised capital market, the resulting foreign exchange volatility has had a major effect on the ability of foreign asset holders and the real sector alike to hedge their foreign currency exposures. Furthermore, while the offshore NDF[5] markets provide a means of managing foreign currency exposures during normal times, volatility spikes over the recent years have had a destabilising effect on the domestic financial markets. The negative spillover from the offshore ringgit market was evident during the period after the US presidential election as the ringgit depreciated by 4.17% while the average daily ringgit volatility onshore rose as high as 10% during that period compared with only 4.6% in 2018.

Ringgit movement (LHS) and ringgit volatility (RHS) Chart 4



Source: Bloomberg.

The adverse impact from the offshore NDF market was similarly highlighted in AMRO's Annual Consultation Report on Malaysia in November 2017. The Granger causality test results suggested that the NDF one-month ringgit rate Granger-caused the ringgit spot rate, with a p-value of almost zero. McCauley et al (2014)[6] also concluded that, while for other countries there is two-way causality between offshore NDF markets and onshore deliverable forward markets, this is not the case for Malaysia, where the causality is unidirectional from the offshore NDF market to the

[4] The evolving structure of FX markets and its policy implications – BIS note for meeting of Governors from major EMEs September 2019.

[5] Non-deliverable forwards.

[6] R McCauley, Robert, C Shu and G Ma, "Non-deliverable forwards: 2013 and beyond," *BIS Quarterly Review*, March 2014, www.bis.org/publ/qtrpdf/r_qt1403h.htm.

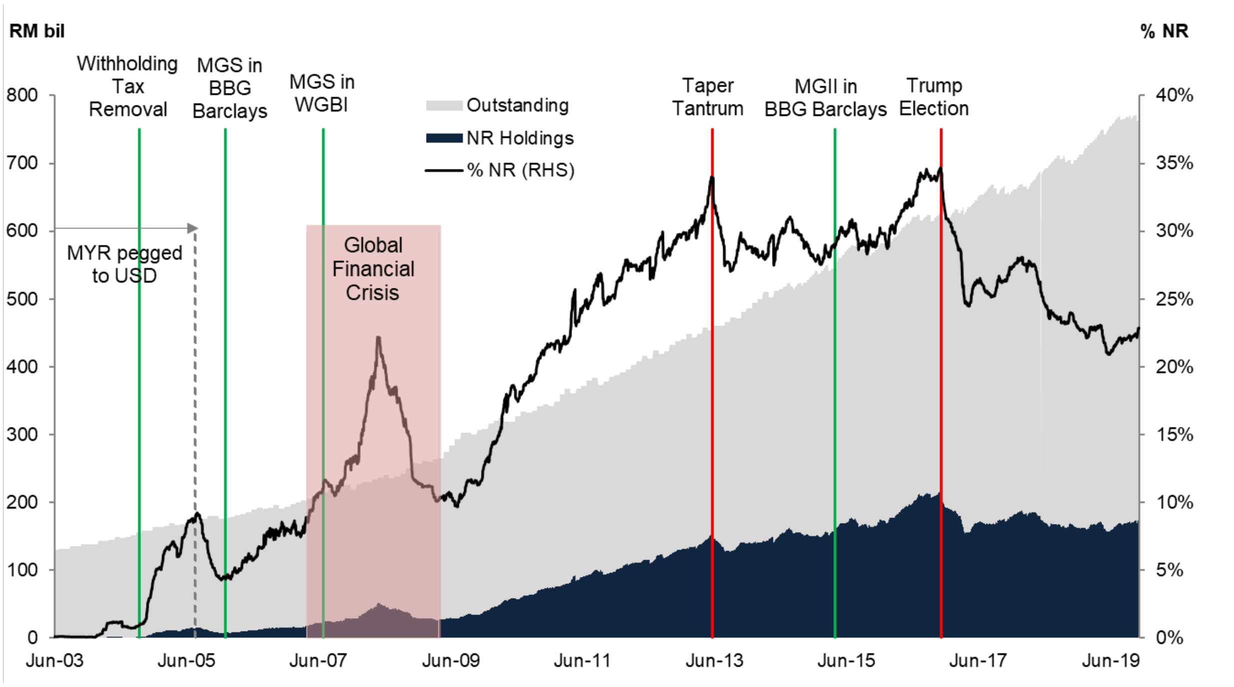
onshore deliverable forward market. This has led to initiatives to further strengthen the resilience of the Malaysian financial market.

Greater diversification of investor types cushioned impact of global financial shocks

Although the impact of imported volatility on the onshore foreign exchange market was prominent, that on domestic bond yields was cushioned by the presence of a large and diversified domestic investor base. Strong support from large domestic institutional investors (DIIs) in the domestic bond market has allowed Malaysia to weather global financial shocks. During periods of heightened non-resident outflows from the bond market, active buying by domestic institutional investors has helped to mitigate excessive adjustments to domestic bond yields. For example, during the broad-based portfolio outflows from emerging market economies in 2018, DII purchases of Malaysian Government Securities (MGS) amounting to RM 34.7 billion largely offset the RM19.8 billion of outflows from non-residents. As a result, the 10-year MGS yield increased by just 13 bp during this period, compared with a regional average of 46 bp. Similar outcomes were also observed during other episodes of external shocks, namely the 2013 taper tantrum and the 2016 US presidential election.

Non-resident holdings of Malaysian government bonds – event timeline

Chart 5



Source: Central Bank of Malaysia.

Policy options to mitigate financial stability risks

Balanced development agendas to mitigate financial stability risks

While the initial stages of bond market development focused on establishing primary markets, post-AFC developments placed greater emphasis on establishing a deeper and broader secondary market. This has attracted greater foreign participation through various market liberalisation measures. However, high foreign participation may have a destabilising impact on domestic financial markets, particularly during global crises, when these capital flows suddenly reverse. Disorderly exits from the market have in the past adversely impacted the domestic FX market in particular, which has an unwarranted spillover impact on the real sector.

In managing the potential implications of global spillovers for domestic financial markets, post-GFC developments focused on balancing market accessibility while ensuring financial stability. Balancing these opposing policy objectives has proved to be a challenge for a small emerging market such as Malaysia with its open economy. While the domestic financial market was further enhanced to manage shifting needs of a more sophisticated investor base, further liberalisation policies have to take into account financial market stability to safeguard the interests of the real sector.

With enhanced transparency and surveillance, more targeted development initiatives were implemented

In realigning BNM's development agenda to balance further liberalisation while preserving financial stability, emphasis is placed on enhancing transparency and strengthening surveillance. The segregated securities accounts at the Real-time Electronic Transfer of Funds and Securities System (RENTAS), the country's large-value payment system, was implemented to provide BNM with information and data for more targeted development initiatives besides increasing efficiency by reducing the reporting burden for investors and lowering the cost of investing in the Malaysian bond market.

With a developed bond and FX market, the current focus is on further broadening and deepening of the Malaysian financial market to meet the diverse and more complex demands of a more developed and internationally integrated economy. Financial market development initiatives are aligned towards enhancing market liquidity and accessibility for real money investors. In the bond and repo market, emphasis has been placed on the development of an effective hedging platform as well as providing greater flexibilities for the conduct of repo. Market infrastructure has also been strengthened for greater surveillance capacity and transparency in the bond market.

In the FX market, a dynamic hedging programme has been introduced to provide accessibility for investors to actively manage their FX exposures of their invested assets via forward hedging activities without the need to show documentation. To date, the programme has benefited 104 registered investors, managing a ringgit assets worth a total of USD 37 billion. The Appointed Overseas Offices (AOOs) framework, an extension of the onshore banks with 151 offices in 36 different countries, has also been enhanced to provide ringgit liquidity after Malaysian hours.

With greater accessibility to the onshore market, the FX market continues to grow, with the average daily value of FX transactions increasing to USD 12.3 billion (year-to-date) compared with only USD 8.0 billion pre-2016. The bond market also remains resilient, with lower volatility and non-resident holdings of Malaysian government bond stable at around 22%. More than half of these holdings were accounted for by long-term investors such as central banks, government, pension funds and insurance companies.

Current focus: Enhancing market accessibility and liquidity while preserving financial market stability

- Increase repo market liquidity and flexibility by increasing availability of off-the-run bonds for market-making activities as well as extension of the maximum tenor of repo to five years and an expansion of eligible securities for repo to accord flexibility to market participants in their conduct of repo.
- Development of an effective hedging platform for investors via enhancements to the delivery mechanism for MGS futures market.
- Expansion of dynamic hedging programme to include trust banks and global custodians.
- Greater dynamic hedging flexibility to manage FX risks beyond the current 25% threshold.
- Simplified FX trade and documentation process for ease of investors' access to the onshore FX market.
- Improve ringgit liquidity beyond local trading hours through the introduction of the Appointed Overseas Offices (AOO) pilot programme aimed at enhancing market liquidity and reducing transaction costs through more efficient price discovery.

Fintech and big tech – risks and benefits from financial sector development

The entry of large technology firms ("big techs") into financial services holds the promise of efficiency gains and enhancements to financial inclusion but presents new and complex trade-offs between financial stability, competition and data protection.[7] Intense competition between incumbent banks with new fintech and big tech entrants may lead to depressed interest margin environment, reducing the overall profitability of the banking system. Heightened competition may also contribute to behavioural distortions through excessive risk-taking, looser lending standards and potential under-pricing of risks, leading to overexpansion of credit and thus a build-up of systemic risk.

In the light of ongoing digital disruption, Malaysian banks are hastening their digital adoption and accelerating investments in infrastructure and human capital to align internal processes and existing business models with digital strategies. Technologies such as advanced analytics, artificial intelligence and open application programming interfaces (APIs) promise to enhance operational efficiency, improve service quality and tap into new growth opportunities. There is also growing traction in partnerships between banks and fintech firms, as evidenced by initiatives piloted by BNM's fintech regulatory sandbox. Such collaborations offer significant advantages by combining access to capital and funding, a broader customer base and banking expertise with innovative ideas and the expertise on emerging technologies provided by new entrants and start-ups. This has in turn produced applications and financial solutions ranging from electronic know-your-customer

[7] BIS, *Annual Economic Report*, Chapter III, "Big tech in finance: opportunities and risks", June 2019.

(eKYC) processes to alternative credit scoring models, robo-advisory services and trade financing solutions using blockchain technology.

In the face of rapid and global digitisation of the economy, policymakers need institutional mechanisms to stay abreast of developments and to learn from and coordinate with each other.[8] It will be interesting to see what other changes will be brought about by technology in the domestic financial market landscape.