

Financial markets in EMEs – what has changed in the last two decades?

Saudi Arabian Monetary Authority

Abstract

This contribution discusses financial market developments in EMEs and, more specifically, in Saudi Arabia. It presents the experience of the Saudi Arabian Monetary Authority (SAMA) and its views on the changes that have occurred during the past two decades in terms of financial market developments and their impact on monetary policy and financial stability in the country. It also illustrates the progress made, along with other authorities in the Kingdom, on the use of financial market technology (fintech) in various fields and the potential impact of prospective developments regarding fintech.

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Financial markets in EMEs – what has changed in the last two decades?

In the last two decades, many significant changes have occurred in Saudi Arabia's financial markets, of which the key developments can be summarised as follows:

- The establishment of the Capital Market Authority (CMA) in 2004. The CMA's main responsibilities include regulating and developing the Saudi Arabian capital market by issuing rules and regulations for implementing the provisions of the Capital Market Law, and by promoting appropriate standards and techniques for all entities involved in securities trade operations. The basic objectives are to create an appropriate investment environment, boost confidence, and reinforce transparency and disclosure standards in all listed companies, and to protect the investors and dealers from misconduct by market participants.
- The establishment of the Debt Management Office (DMO) in 2015 to secure the Kingdom's fiscal financing needs at the best financing costs in the short, medium, and long term at an acceptable degree of risk in compliance with financial policies and to maintain its ability to access the international financial markets on fair pricing. On October 2019, the DMO was converted into the National Center for Debt Management. The centre will enjoy financial and administrative independence, and it will provide advisory services and propose executive plans for government agencies and companies in which the state owns a stake of more than 50%. The powers of the centre include the collection, processing and follow-up of public debt data, negotiating debt restructuring, re-pricing or re-contracting, or services related to hedging policies or managing investor relations in public debt instruments, or securing a credit rating.
- The establishment of the Securities Depository Center (Edaa) in 2016 as a closed joint stock company in accordance with the Saudi Companies Law. The principal responsibility of Edaa is to operate and maintain the Depository and Settlement System (DSS), an electronic book-entry system used to record and maintain securities and to register the ownership of securities, in addition to linking centre members through the DSS.
- The Saudi Arabian Monetary Authority (SAMA) with the cooperation and support of the commercial banks and other government agencies has developed a number of payment and settlement systems such as the Saudi Arabian Riyal Interbank Express (SARIE) system, and the SADAD Payment System (SADAD) to facilitate economic development and promote financial stability in Saudi Arabia. The SARIE system is the mainstay of the Saudi payments infrastructure. It has been fully owned and operated by SAMA since May 1997. SARIE essentially provides a platform that links all Saudi commercial banks enabling them to settle payments in Saudi riyals. In doing so, SARIE provides a platform for new, interbank payment streams, supporting new (financial) product development and the goal of broadening financial inclusion.
- A further major driver has been the Kingdom's 2030 Vision, which endeavours to reinforce economic growth and investment activities. The Kingdom's 2030 Vision has been further developed into 12 Executive Programs, which includes the Financial Sector Development Program (FSDP). This programme seeks to develop the financial industry as a diversified and effective financial services sector to

promote the development of the national economy by stimulating savings, finance and investment by, inter alia, enabling financial institutions to support private sector growth.

- In order to understand and assess the impact of new technologies in the Kingdom's financial services market, as well as to help transforming the Saudi market into a sophisticated financial centre, SAMA has designed a regulatory sandbox that welcomes local as well as international firms wishing to test new digital solutions in a "live" environment with a view to deploying them in the Kingdom in the future.
- The establishment of the Saudi Payments Company in 2018. The aim is to increase financial inclusion through the organisation and development of the payments sector and the establishment of an independent entity. This will provide a common infrastructure to ensure competitiveness among payment service providers in line with the objectives of the Financial Sector Development Program.
- Saudi Arabia's QFI Program was introduced in 2015 to facilitate participation by international investors in the Saudi capital market. Through this programme, international investors have direct and full access to the Saudi Stock Exchange (Tadawul). QFI qualifying criteria and foreign ownership limits were recently eased and the Saudi IPO market is now open to QFIs.
- The Tadawul has completed its full inclusion on the MSCI emerging markets index in June 2019. The Kingdom was also added to the FTSE Russell as a "Secondary Emerging Market" in March 2018.
- SAMA and the Central Bank of the United Arab Emirates have launched a digital currency known as "Aber" for use in financial settlements between the two countries via distributed ledger technology. The proof-of-concept stage will establish if remittance costs can be reduced and assess the technical risks and how to deal with them. Furthermore, it will establish an additional channel for the central financial transfer systems of the two countries.

To ensure financial stability and mitigate systemic risk within the banking sector, SAMA has applied a wide range of macroprudential measures in recent years. SAMA has also launched several other initiatives that have contributed positively to economic and financial stability, including the implementation of Basel III requirements, the establishment of a formal framework for macroprudential policies, the establishment of a deposit protection fund, and the regulation of finance companies. Responsible lending principles have also been put in place.

The impact of financial market development on monetary policy

Following the Great Financial Crisis, concerns over central banks' ability to respond to another recession has increased due to their limited monetary policy space. More recently, a notable shift towards increased monetary policy accommodation has absorbed the impact of trade tension on financial market sentiment and activity. With global inflation below targets, central banks in major advanced economies have turned to a more accommodative policy stance since early 2019. However, monetary

policy space remains constrained by the effective lower bound in many countries, limiting the policy options available to address future shocks. Except for the United States, most major central banks in Europe and Japan are already in a negative rate zone and face limits on how much lower they can go. Furthermore, with already large balance sheets from successive rounds of quantitative easing (QE), central banks will also face constraints if they were to return to large-scale asset purchases. The forward guidance tool may also face constraints in the future.

Some emerging market economy (EME) central banks have also cut rates driven mainly by a slowdown in the global economy and trade frictions.¹ Monetary policy in Saudi Arabia remains committed to the fixed exchange rate and aims to maintain monetary stability mainly through liquidity management and the standing facility (repo and reverse repo agreement).

Globalisation may influence the transmission of monetary policy. Monetary policy spillovers spread via three common channels, which are aggregate demand, the credit channel and the exchange rate channel. Recent financial market development has had a direct impact on the credit channel in particular. The credit channel proves a strong monetary transmission mechanism with an impact on the financial system, and thus the real economy.

The recent academic literature suggests that the “natural” rate of inflation may fluctuate over time due to forces such as technology, globalisation and demographics. For example, increased trade with China and other EMEs has led to a slower growth in the prices of imported-manufactured goods. In addition, as technology is more prominently used to produce goods and services, companies in all industries are achieving lower production costs.

The inflation target rate of 2 percent may not be the appropriate for every region and it might vary depending on the economic structure. Therefore central banks might review their objective of maintain a 2 percent inflation target and calibrate their operational target and instruments accordingly.

Transmission of monetary policy in Saudi Arabia has remained stable, relying mainly on adjustments to the standing facility that influences the overnight interbank rate (SAIBOR), which translates ultimately into lending rates. Based on reductions in the SAMA policy rate, SAIBOR-based rates have declined for mortgages and corporate lending. But the development of financial markets will play an important role in changing other funding rates, for example, via new bonds issued by the corporate sector.

Domestic financial conditions in small open economies tend to follow those applying abroad, as evidenced by the strong co-movement in interest rates across advanced countries and EMEs. The international interdependence of interest rates, particularly at short maturities, has been widely interpreted as evidence that small open economies lack monetary autonomy.²

More recently, lower interest rates in advanced economies have triggered capital flows to EMEs.³ External conditions and financial spillovers pose additional challenges.

¹ See IMF, *World Economic Outlook*, October 2019 – Chapter 1.

² See C Caceres, Y Carriere-Swallow and B Gruss, “Global financial conditions and monetary policy autonomy”, *IMF Working Papers*, June 2016.

³ See IMF, *Global Financial Stability Report*, October 2019.

The shift in monetary policy stance in advanced economies has contributed to large capital flows and sharp exchange rate movements with implications for domestic monetary policy.

In Saudi Arabia, the banking sector is well capitalised and resilient to external shocks, as reflected by the financial soundness indicators. Moreover, the Kingdom has accumulated a large stock of foreign reserves, which also help ensure its ability to weather external shocks.

Broad domestic capital market reforms have resulted in the country's inclusion in global EM equity and bond indices, leading to additional portfolio inflows. Since portfolio (and bank) flows are more volatile than FDI flows, the central bank has a role to play in mitigating potential risks of sudden large outflows.

Investors have always been looking into emerging markets in searching for yield and growth potential. Therefore, capital flow could have significant impact on EMEs. As such, to make an informed investment strategy, it is imperative to assess the financial position, as well as measure the performance of the financial system, banking profitability and private sector credit growth.

The banking sector in Saudi Arabia, due to SAMA's regulations and macro-prudential measures, remains sound, resilient and profitable. Economic liquidity, as measured by the broad money supply (M3), recorded a growth rate of 2.7%, due to an increase in bank credit to the private sector by 3.8% as of the third quarter of 2019. Government spending and improved confidence is a key factor in overall credit growth, especially bank credit to building and construction and manufacturing.

The low inflation rate (−1.12%) in the third quarter of 2019 is attributed to the decline in housing and utilities caused mainly by rentals for housing (compared with 2.19% in 2018). Inflation is expected to reach 0.4% due to multiple factors such as the expected growth of the private sector and money supply, in addition to higher aggregate demand due to government spending.

Monetary policy in Saudi Arabia is anchored by a fixed exchange rate to the US dollar. A "credible peg" backed by SAMA's substantial foreign exchange reserves has been in place since 1986, so that interest rates follow US rates with a small premium. Monetary policy aims to maintain monetary stability through a wide range of tools, mainly the standing facility (repo and reverse repo agreement) and liquidity management. Liquidity management has been crucial in the most recent financial market developments and fiscal reforms during 2015–16. In its efforts to strengthen its liquidity management framework, SAMA has developed a liquidity-forecasting model to support decision-making and calibrate interventions.

In the light of financial market developments, communication with all stakeholders has become increasingly important for achieving monetary policy objectives over the past decade. Indeed, communication is increasingly seen as a policy tool in itself. Communication plays an integral part in both monetary and fiscal policy. For example, in monetary policy, communication takes place within a well established policy framework and plays a central role in managing inflation expectations. Moreover, for fiscal/economic policy, with clear communication, reforms can be understood and accepted by those whom they affect, thus helping to achieve the policy target.

Although recent financial market development has heightened the importance of policy communications, SAMA's practice remains consistent due to its effectiveness and practice of announcing all policy changes publicly and to all stakeholders. In

addition, SAMA continues to publish monetary development reports quarterly and annually. As for communication with financial institutions specifically, SAMA holds regular meetings with banking sector management in order to increase the effectiveness and transparency of communication with all stakeholders.

Best practice for central banks includes the announcement of a clear objective and frequent and regular publication of statements and reports that give an account of the factors behind policy decisions. Improvements along these lines over the past decade have brought the level of transparency in EMEs much closer to that seen in advanced economies.⁴

Impact of financial market development on financial stability

The Saudi banking sector has shown a high degree of resilience in recent decades. The strong capitalisation of Saudi banks has been an important factor here. Asset quality has also continued to show a sustained improvement as a result of supportive factors and regulatory initiatives. This includes a favourable economic and business environment, SAMA's hands-on regulatory oversight coupled with risk-based supervision, and the obligation for banks to adopt improved risk management practices following the implementation of Basel III. Banks are also subject to all other relevant standards and principles issued by the Basel Committee and the Financial Stability Board. In addition, the establishment of the Saudi Credit Bureau (SIMAH) has also helped banks to enhance their risk management capabilities, strengthen the credit information system, speed up various processes and improve lending decisions.

Despite the comfortable position for banks with regard to assets, capitalisation and liquidity, the banking system faced a liquidity shortage in 2016 due to the domestic debt issuance programme that began in 2015 and continued into 2016. This put some pressure on the banking system's deposits, resulting in higher market rates as banks competed for deposits to shore up funding. The liquidity pressure was short-lived due to the prompt SAMA response, causing market rates to trend down by the end of 2016, thereby bringing down the cost of funding in the interbank market. To ensure robust liquidity supervision, SAMA collects monthly liquidity coverage ratios from the domestic banks, which serves to anticipate any potential liquidity strains in the system. This also ensures that domestic banks invest adequately in their operational infrastructure to meet the reporting requirements.

SAMA's prudent regulatory framework requires banks to maintain a capital level (regulatory capital to risk-weighted assets) well in excess of the Basel Committee's minimum requirements. For example, the Basel requirement for the bank capital adequacy ratio (CAR) is 8% while minimum CAR required by SAMA is 12%. Furthermore, SAMA was at the forefront of implementing the Basel III capital adequacy regulations in 2008. The Saudi banks are not facing challenges in adopting the Basel III standards. They were among the first in the region to fully implement the enhanced CAR under Basel III (standardised approach), with all banks reporting their Basel III CAR in their March 2013 financial statements.

⁴ See IMF, *World Economic Outlook*, October 2018 – Chapter 3.

Moreover, SAMA periodically performs top-down stress testing to evaluate banks' resilience against hypothetical macroeconomic shocks. The current stress test is based on three different scenarios that range from mild to severe macroeconomic shocks. In addition, SAMA requires individual banks to semiannually perform and report the outcomes of their own stress tests. These outcomes are reviewed regularly and used in SAMA's top-down stress tests to ensure consistency and resilience on both the macro and microprudential levels.

In the shadow banking area, a new law was passed in 2012 to license and regulate finance, leasing and mortgage finance companies. With these reforms, a part of the shadow banking sector is being regulated by SAMA, which already regulates money exchange companies and insurance companies.

As for the Saudi capital market, shadow banking activities are limited. The 2008 crisis highlighted excessive risk-taking by less regulated institutions and transactions involving liquidity transformation, maturity mismatches and leverage conducted via the shadow-banking sector. Regarding capital markets-based intermediation; shadow banking (mainly via collective investment scheme products) is insignificant in scale in Saudi Arabia.

Moreover, in line with the Kingdom's Vision 2030 to advance and diversify digital services, alternative payment options are now available such as STC pay, which is a digital secure wallet, and MADA Pay, which is a smart device application service that allows holders of the MADA debit or credit cards to make contactless payments. These innovations have also contributed to the reduction of shadow banking in Saudi Arabia.

Financial market development is uneven across EMEs. Growth in derivatives turnover is positively related to trade, financial activity, cross-border capital flows and floating currencies. About 10% of global derivatives turnover is reportedly in contracts denominated in EME currencies, much lower than the share of these economies in global GDP or world trade. Derivatives in EME currencies also tend to be less complex and more likely to be traded outside the home economy than those in advanced economy currencies. Global turnover in non-deliverable forwards (NDFs) continues to rise in aggregate.

Growth in renminbi foreign exchange derivative activity has been underpinned by Chinese financial market liberalisation. This includes the exchange rate and domestic interest rates gradually becoming more market determined. A substantial proportion of the rise in renminbi denominated foreign exchange derivative turnover has occurred outside of China, largely in Hong Kong SAR and Singapore. Within China, foreign exchange derivative activity remains small relative to trade and capital flows.

Original sin refers to EMEs inability to borrow abroad in their own currencies. It is now largely outdated for sovereign debt as EME sovereigns now issue debt in hard and local currency. EME corporates are also issuing in their own currencies to diversify their investor base.

As a continuation of the Kingdom's efforts to open up its financial markets to international investors, the Tadawul has completed its full inclusion in the MSCI emerging markets index and it has also joined the FTSE. According to the Institute of International Finance (IIF) report, foreign equity inflows to Saudi Arabia surpassed those into India and China in the first eight months of 2019. Strong inflows to Saudi

Arabia in 2019 are in sharp contrast to other emerging markets, where renewed US.-China trade tensions are said to be responsible for weaker equity flows.

The gradual opening of the market to foreign investors has helped to limit the volatility that would result from a sudden large-scale entry of foreign investors. In an attempt to deepen the market, regulators have implemented a number of supportive measures in the past to gradually open it up to foreign investors. Indirect foreign investment was allowed through mutual funds in 1999, and foreign resident investors were granted direct access to the Saudi capital market in 2006. A year later, GCC residents were also granted direct access to the Saudi capital market. In 2008, non-resident foreign investors were also allowed to indirectly access the Saudi market through Saudi Equity Swap (SES) agreements. In 2010, exchange-traded funds (ETFs) were launched to allow non-resident foreign investors to directly invest in them.

There is some evidence that floating exchange rate regimes and financial markets that are more integrated with the global economy are associated with foreign exchange derivative markets. Country experiences also demonstrate that foreign exchange derivative activity need not occur within the domestic market. The development of foreign exchange derivative markets is part of broader financial market development, which is still work in progress.

The onshore FX derivative market in EMEs is at a nascent stage and access to offshore investors is very limited. Onshore markets tend to be used by central banks to implement macroprudential measures rather than to provide access to market participants.

Documentation, liquidity, credit risk of local counterparties, and lack of transparency in FX fixing are some of the constraints for derivative markets. For example, Indonesia started an onshore FX derivative market in 2018 for onshore banks, with access for very few offshore dealers. Bank Indonesia is using this market to lower the volatility in the rupiah and help its domestic banks hedge bond portfolios. The Bank of Mexico started an intervention programme via the onshore NDF market in the peso three years ago, with no access to offshore managers. Malaysia also has an onshore NDF market to hedge bond exposure but it is extremely illiquid.

Given the constrained development of FX cash and derivative markets, EMEs remain exposed to FX volatility and spillovers. Offshore NDFs are the result of an underdeveloped onshore market and its anomalies.

Many EME currencies shadow the dollar or (to a lesser extent) the euro in some form ranging from explicit currency pegs to undisclosed currency baskets. This makes them potentially vulnerable to FX speculation about an impending devaluation. Commodity currencies are often subject to speculative pressures, reflecting softer commodity prices, and the forward market route tends to be the cost-effective channel for taking a speculative position. Such episodes (ie speculation as opposed to genuine hedging) trigger central bank intervention in the forward market, with a directive to the domestic banks to restrain from actively participating in quoting forward prices.

Saudi Arabia has an active cash market in USD/SAR, but activity in FX derivatives in the form of forwards and options as well as that in interest rate swaps is very modest.

SAMA continues to adopt a wide range of macroprudential measures to ensure financial stability and mitigate systemic risk formation within the banking sector. Over

the years, SAMA's macroprudential policy has ensured that the banking sector is able to withstand financial and economic shocks and vulnerabilities. SAMA gives high priority to ensuring that banks are fully capable of managing their liquidity mismatch of assets and liabilities, and that they are well positioned to meet cash flow obligations in a timely manner. Consequently, the banking sector's asset portfolios comprise largely high-quality liquid assets such as Saudi government bonds, SAMA bills and reserves with SAMA. The leverage ratio is an additional stability factor as it acts as a credible supplementary measure to the risk-based capital requirements.

As a part of SAMA's commitment to build a comprehensive macroprudential toolkit, SAMA included the Loan-to-Value (LTV) Regulation in 2013 as part of the Real Estate Finance Law. The LTV helps SAMA to fulfil its mandate of protecting and safeguarding financial stability, by curtailing speculative purchases that may serve to increase volatility in the real estate sector, and possibly fuel asset bubbles.

SAMA closely monitors credit growth in general and credit to the private sector in particular. It also encourages Saudi banks to increase their capital buffers on a countercyclical basis.

Looking ahead

Fintech and big tech companies use technology to automate manual processes, reducing costs and speeding up the transaction process. Large third-party payment companies can scale their operations quickly either across a country or internationally. As a result, there is likely to be a faster movement of capital globally. This is likely to have a number of effects on monetary policy implementation and transmission:

- Faster movement of capital may make monetary policy more effective. This is because the impact of changes in monetary policy is likely to be accelerated.
- However faster international capital flows may also increase the risk that domestic monetary policy has a greater impact on the international monetary system as it can trigger faster outflows or inflows of capital.
- Faster capital flows may also create more volatility in the financial system, requiring higher levels of reserves to mitigate such risks.
- Greater participation in financial services by fintech and big tech companies will increase non-banking activities. This may reduce the impact of monetary policy transmission as monetary policy would have less of an impact over non-banking capital.
- The impact of global stablecoins (GSCs) on monetary policy transmission will depend on the use cases for GSCs.
- If GSCs are used as a medium of storage and gain significant traction, monetary policy transmission is likely to become less effective as monetary policy will only impact domestic currency and will not be able to influence changes in GSCs.
- If GSCs are used to process payments, there is unlikely to be an impact on monetary policy as GSCs will be converted to and from the local currency.
- If a GSC is used as a currency competing with central bank-issued currencies, the impact of monetary policy transmission is likely to be reduced in economies

where a GSC is more widely used than the national currency, as monetary policy may not be able to influence the GSC.

- The increased participation of fintech firms and big techs in new funding and lending models is likely to create a number of risks to financial stability:
- Lending provided by fintech or big tech firms tends to focus on customers that are either too small or too high-risk for traditional banks. If these borrowers are underbanked and are provided with loans without fully understanding how loans work, there is a high risk of default. In markets where a large proportion of the population are underbanked or unbanked, such defaults on a large scale could create financial instability.
- Fintech firms and big techs providing lending may not have the same level of risk management as banks and may therefore not conduct sufficient checks on their clients. This could open the market to a higher level of financial crime and a stronger shadow economy, which could create greater financial instability.
- New solutions in funding and lending tend to use technology to automate functions in order to provide cheaper and smaller loans. This has the potential to create a number of risks to financial stability. First, if the technology is not fully understood, there could be unintended consequences that may create financial stability risks. Second, if the same technology provider is used by a large proportion of the fintech solution providers, there is a technology concentration risk where a disruption to the technology provider could impact a large number of fintech solution providers, creating a financial stability risk. Finally, increasing use of technology is also likely to result in more cyber attacks. As the dependency on technology increases, such cyber attacks could threaten financial stability.
- Greater use of alternative models for interbank funding and lending may reduce the impact of monetary policy. If monetary policy is less effective, this could increase the risk of greater financial instability.
- Big tech companies have the potential to scale internationally and dominate the lending market due to their global reach. This creates a concentration risk where, if such tech companies attained a large enough market share and their operations were disrupted, this might create greater financial instability.
- Banks tend to have high levels of regulated reserves. Big tech and fintech companies may not be required to have similar levels of reserves. This would mean that they are more susceptible to economic shocks. If they control a large share of the market, such disruption is likely to impact financial stability.

There are a number of approaches that policymakers could take to mitigate emerging risks:

- A robust and internationally coordinated legal, regulatory and oversight framework: while banks tend to operate more locally, big techs and fintech firms are likely to have a more international reach. It is therefore important to have an internationally coordinated framework to share knowledge between regulators and effectively regulate fintech and big tech companies. In fintech areas that are well understood, international coordination and agreement will support the effective regulation of companies that can operate internationally and prevent regulatory arbitrage. Furthermore, big tech companies have the potential to dominate financial services activities internationally. It is therefore important that

regulators monitor the level of competition in the marketplace to avoid a small number of firms dominating financial services.

- International coordination on regulatory sandboxes: for emerging innovation and business models, the regulatory sandbox approach enables regulators to evaluate innovative solutions before regulating them. International coordination on regulatory sandboxes will support greater knowledge-sharing on emerging innovation in order to reach an international consensus on regulating these areas.
- Regulation and reserve requirements should be correlated with the size of activities: as fintech and big tech companies play a more active role in financial services, the level of regulation and reserve requirements should be correlated to the scale of their activities. This is to ensure that, when such companies gain in importance in financial services, they are able to sustain economic shocks.
- Technology understanding and monitoring: as technology plays a growing role in financial services, it is important that the technology used is fully understood and that international standards are developed for emerging technologies. It is also important that the technology providers used by financial services companies are monitored to mitigate concentration risk among technology providers. International knowledge-sharing and coordination on regulation of new technologies used in financial services can help mitigate the risk to financial stability.
- Greater investment in cyber security: as technology plays a larger role in financial services, cyber attacks will become a greater threat to financial stability. It is therefore important for regulators to share knowledge related to cyber security and continue to encourage investment in the area.
- Initiatives to improve financial literacy: as big tech and fintech activities tend to focus on unbanked or underbanked customers, regulators should encourage initiatives to improve financial literacy to ensure such customers understand the financial activities and transactions they are undertaking. This will reduce the default risk of such customer groups, contributing to overall financial stability.

The monetary policy transmission mechanism and its effectiveness are to a large degree influenced by financial sector developments. Essentially, monetary policy transmission is a financial process with the financial system as the channel through which monetary policy decisions affect the real economy. SAMA continues to enhance its monetary policy framework and contribute to financial infrastructure developments, through which monetary policy transmits to real economy, of which we mention:

- Interbank repo market: a working group has been established under SAMA's supervision and with banks as members to develop a legal and operational framework in order to establish country-specific guidelines better suited for the local financial system and compatible with both sharia and conventional standards.
- Open market operation: in line with SAMA's role in managing liquidity, the Open Market Operations framework has been enhanced to complement the liquidity management framework at SAMA and to support banks in managing their liquidity.