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FinTech's Islamic Finance and Capital Market Frontier: Opportunities, Challenges, and the Malaysian Landscape

Introduction

Malaysia is a nation of approximately 34 million people with diverse ethnicity originating from the Malay Archipelago, mainland China, the Indian subcontinent and other surrounding nations in Southeast Asia. It is geographically small and democratically governed with a constitutional monarch, and Islam as its official religion.

Malaysia practices an open economy and firmly advocates fair and transparent trade. As a champion and strong advocate of Islamic finance, it puts Islamic finance as one of the key economic drivers for economic growth. Since the early 1980s, the Malaysia government has established a dual regulatory structure that allows conventional and Shariah-based regulations to co-exist as the main parameters for financial and capital market activities.

In the current day, the development of financial technology (FinTech) and digital innovation have brought new dynamism to Malaysia, including to Islamic finance and capital market. Innovativeness from FinTech compelled Shariah scholars and the Islamic finance industry to review their current practices, as well as outlook, albeit it is not really a new element. The challenges are on the renewed perspectives on the existing strategy and approaches, impact on stakeholders' mindset and mostly, the importance of data in the digital structure, narratives that shaped customers' expectations, business model evolution and security in the cyber environment.

This article will explore the vital aspects being considered by the key stakeholders of Islamic finance and capital market in the Malaysian context.

Overview of FinTech in Malaysia

The development of FinTech in Malaysia, specifically around the regulated financial and capital market sector, began with several landmark initiatives.

One notable initial boost for FinTech development was the issuance of a consultation paper on the guidelines for equity crowdfunding (ECF), by the Securities Commission of Malaysia (SC) in September 2014. This encouraged the financial and capital market industry to regroup by establishing the Fintech Association of Malaysia (FAOM) in December 2015, with one focus, among others, to work with the relevant enablers, including financial regulators, in advancing the development, enhancement, and deployment of FinTech in Malaysia.

The central bank of Malaysia, Bank Negara Malaysia (BNM), responded with the establishment of the Financial Technology Enabler Group in May 2016, and launched the Regulatory Sandbox in October 2016 to facilitate a conducive environment for FinTech experimentation and growth by providing regulatory oversight. In February 2024, BNM enhanced the Regulatory Sandbox[1] by creating two tracks – the Standard Sandbox which is the continuation of the earlier version to allow unlicensed entities to experiment with their innovations, and the Green Lane, an accelerated track for licensed financial institutions with a proven risk management track record to test their innovations that face regulatory impediments. Useful details about the BNM Regulatory Sandbox are available in the Appendix.

Concurrently, the SC has also launched a regulatory sandbox[2] to facilitate testing of innovative capital market products and services by eligible Malaysia-based entities, regardless of their licensing status. Eligible applicants needed to apply between 15 April 2025 and 31 May 2025, subject to pre-consultation with the SC's Affinity team that manages the regulatory sandbox. Useful details about the SC regulatory sandbox are available in Appendix.

These regulatory sandboxes demonstrate that Malaysia adopted a multi-pronged approach toward FinTech development, by facilitating industry-led experimentation, and a balanced approach to encourage proportionality on innovation and comprehensive risk awareness, as well as a pragmatic regulatory environment for

Current State of FinTech in Malaysia

As of November 2024, Malaysia had 280 FinTech companies (21 companies i.e.,7.5% under Islamic FinTech) broken down as follows: payments (22%), lending (12.5%), e-wallet (11.9%), blockchain (7.6%) and cross-border payment (7.6%)[3].

Specific to the capital market, besides the regulatory sandbox, the SC has issued several relevant regulations that have facilitated FinTech developments, as per the following list:

- Digital Investment Management (DIM)
- Digital Broker
- Online Distributor
- ECF, Peer-to-Peer (P2P) Financing, Property Crowdfunding (PCF), E-Services
- Digital Asset Exchange (DAX)
- Initial Exchange Offering (IEO), Digital Asset Custodian (DAC)
- Guidelines on Management of Cyber Risk

These regulations, which are applicable to both the conventional and Islamic capital markets, have catalysed innovations on the creation of new ecosystems, business models, and solutions as a service, and initiated new perspectives beyond the typical path. For instance, regulations on PCF, DIM and DAC started innovations on tokenization of real-world assets (RWAs) that enable owners to tokenize and fractionalize their ownership and/or economic returns into an affordable and tradeable unit, thus allowing creation of a new investment asset-class that is affordable and unlocking values of RWAs. Further elaboration on the application of tokenization of RWAs can be found in the section on FinTech Development in Capital Markets below.

A second example is the creation of micro-sukuk that has shorter tenure (i.e., less than 12 months), using the issuer's business drivers as the underlying asset and is tokenizable. This would improve cost-effectiveness of issuance, enhance access to wider investor segments, and create an alternative source of business funding, especially for micro, small and medium-sized enterprises (MSMEs) as potential issuers. This is an interesting innovation as it provides multiple solutions in the area of fund-raising and financial discipline for MSMEs, unlocking untapped potential to scale faster, as well as creating liquidity in the sukuk market with wider accessibility and affordability, especially for new and novice retail investors.

Another example is an experimental solution on Portfolio Accelerator (PA) that focuses on addressing a gap in the retirement needs of those with low basic income. The PA will use leveraged financing for a diversified investment portfolio which will enable low basic income individuals to improve their retirement savings through proportional pairing of micro-investing with micro loans. This is not meant as a replacement for the government-run provident funds but rather as a supplementary mechanism targeting lower income employees, gig workers, and blue-collar migrant workers.

These latest FinTech solutions are uniquely established in Malaysia largely because of the regulatory framework that oversees conventional and Islamic capital market ecosystems with clear demarcation and dynamism, as well as proportionality between innovation with governance, risk management and regulatory compliance.

Compatibility of Islamic Finance Principles with FinTech Solutions

Islamic finance is the practice of following the Shariah principles called "Fiqh Muamalat" or Islamic economic law that regulates financial transactions, contracts, and economic interactions. A key focus of Fiqh Muamalat, among others, is prohibition of interest (usury or Riba), fairness, honesty, and compassion amongst stakeholders. Fiqh Muamalat also emphasizes moral and ethical considerations in economic activities, such as prohibition of fraud, deception, and exploitation of others.

The majority of FinTech solutions are focusing on innovative, creative, and efficient solutions. For instance, the DIM solution, commonly known as robo-advisor, utilizes artificial intelligence (AI) to profile investors based on their risk appetite, and automates portfolio investing and asset allocation, as well as utilising both leading and lagging data as a foundation for portfolio analysis and strategy.

It is obvious that the principles of Islamic finance and FinTech solutions are aligned and have great potential to catalyse the creation of fair, transparent, and efficient ecosystems that is vital in promoting trustworthiness among key stakeholders, new services to be delivered by innovative and cost-effective entities, as well as new perspectives on the strategic formulation for investing in financial and capital market. From a national perspective, Malaysia's position, with banking industry assets second only to those of the Gulf Cooperation Council countries, would be further enhanced as the alignment of Islamic finance and FinTech solutions would stimulate inbound and outbound digital-based initiatives relevant to the Islamic capital market.

The following five sections outline the specific building blocks of the potential growth of Malaysia's Islamic capital market including opportunities, challenges, and relevant use cases as illustrations.

FinTech Development in Capital Markets

As shared above, the sandbox created by the SC is an opportunity for aspiring innovators to conduct a variety of experiments involving capital market products, services, and related elements. The examples of tokenization of RWAs, micro-sukuk and the PA are among the potential innovations that would enhance the depth and breadth of Malaysia's capital market through democratizing access for a wider segment of investors, improving cost effectiveness of capital raising, and improving governance and risk management through better transparency and financial discipline.

However, it is foreseen that shifts in mindset and paradigm, legacy concerns and as yet unproven results of technology implementation are likely to delay swift adoption of innovative FinTech solutions. Current decision makers at the senior management and board level are sceptical of the capability, relevancy and viability of these innovations, partly because they are viewed through a legacy and lagging perspective, instead of as potential and leading indicators. In addition, there is also an inferiority complex among the decision and policy makers, mostly due to a lack of knowledge and blind spots about key aspects of technology. This is apparent as the average age of directors at Malaysia's financial institutions is 60 years old and nearly half of these directors have accounting and/or legal backgrounds[4], which highlights their lack of strategic understanding about FinTech, as well as of key perspectives on matters such as governance, data management and talent.

Infrastructure Development and Interoperable Data Framework

There are two main challenges for FinTech to be effective, operationalize effectively and become functionally scalable: the outdated legacy infrastructure and secure interoperable utilization of various data.

The existing financial infrastructure such as the Bursa Malaysia Securities, PAYNET, RENTAS (the BNM's Real-time Electronic Transfer of Funds and Securities) and the capital market in general, are yet to be updated with the relevant technology to manage functioning innovative FinTech solutions such as tokenized RWAs, micro-sukuk and the PA. Although Bursa Malaysia's daily trading volume improved between 2022 and 2024 by 89.1% year-over-year to 5.3 billion units[5], it was not optimized through technology. The recent growth was driven by proprietary and local nominees' investors, indicating that FinTech innovation was not a contributing factor. Other infrastructure such as RENTAS is still settling institutional payments through the delivery versus payment (DVP) mechanism, instead of the payment versus payment (PVP). The main concern is on unresolved key settlement and counterparty data transparency risks that could pose financial and reputation losses to various stakeholders, especially between the central banks and wholesale banks, as well as between corporate and institutional customers. It is a known fact that the shift from DVP to PVP could be resolved with FinTech solutions such as the distributed ledger technology, but the lack of willingness on the part of policy and decision makers to shift mindsets and paradigms remains a key obstacle to the needed changes.

The other key challenge is to establish an interoperable data management framework (IDMF) at various levels – i.e., entity, industry, ecosystem, and infrastructure – that is secure, real-time and trustworthy, for both the capital market and financial industry. It is imperative for the IDMF to be established in this manner to facilitate orchestrated real-time data sharing for transaction settlements, effective risk management, and stable ecosystem interoperability. Currently, a matrix of disjointed data flows creates security concerns, undermining the effectiveness, and efficiency of value-creation activities, as well as increasing the information asymmetry among stakeholders at various levels.

The impediments described above are potentially solvable with FinTech. For instance, RTGS.Global[6] is one of many private firms that could offer central and wholesale banks settlement utilizing the PVP mechanism running on distributed ledger technology. This is a realistic potential solution that could solve both impediments, as well as provide an efficient, cost-effective, secure alternative cross-border settlement mechanism for both wholesale and retail transactions. Enroute to implementing such solutions, policy makers at central banks need to consider, first, amending existing laws and regulations to allow commercial banks to utilize the statutory reserve account (SRA) currently maintained at their respective central banks to be used as the settlement account. Second, the SRA shall be the primary identifier on the distributed ledger platform shared by all counterparties that would facilitate real-time interoperable data sharing and importantly, making the shift from DVP to PVP mechanism.

Islamic Capital Market and FinTech

Given the developments and progress shared above, the Islamic capital market in Malaysia has vast growth potential with optimal utilization of FinTech solutions as one of its key catalysts. In addition, its position as a mature Islamic capital market would provide sufficient depth and breadth of relevant data for various key stakeholders in developing FinTech solutions.

For instance, sukuk[7] which accounted for about sixty percent[8] of Malaysia's debt market, could be further democratized to make issuance more cost-effective, by digitalizing the issuance processes to cater to small-volume issues by micro and small enterprises. Currently, sukuk are issued with a minimum value of USD200,000 and tenure of not less than 12 months, making them only affordable and suitable for large entities such as listed corporations, national or state government agencies, and large corporations. In addition, the current processes, from pre-issuance, underwriting, primary market to secondary market, are primarily focused on institutional and accredited, investors as well as High-Net Worth Entity (HNWE) and High-Net Worth Individual (NHWI) segments, as per the SC's Guidelines[9].

The above discussion describes an opportunity for FinTech solutions to enhance sukuk issuance by MSMEs, as well as adding individuals not categorised as HNWI as investors. Firstly, micro-sukuk with lower values (between USD2,500 up to USD25,000) with shorter tenure (from 3 months up to 12 months) and utilizing predetermined Shariah contracts could be issued, on an experimental basis, on a digital advisory platform. Secondly, these innovations need to be tested for at least 12 months on the SC's regulatory sandbox and closely monitored and calibrated with the existing guidelines on sukuk approval processes, credit rating, shariah compliance and advisory, underlying assets, and prospectus, as well as the necessary structure to protect retail investors.

Experimenting with micro-sukuk is a continuation of the concept the Malaysia Government used with the issuance of Sukuk Prihatin[10] in 2020 to 2022, a step which galvanised participation by public retail investors, despite a large federal government subsidy and tax breaks that lowered issuance costs. As stated, Malaysia's vast experience in sukuk-related activities backed by credible historic data over three decades has put the country at the forefront, but these elements need to be utilized through innovative experimentation, fresh perspectives, and facilitation by the SC with industry players to enhance the sukuk market in Malaysia.

Case Studies of Successful FinTech Applications

Malaysia's issuance of Sukuk Prihatin in 2020 as the first digital sukuk was a purpose-driven innovative digital solution adopted as a collective way to galvanize various resources, proven talents, and institutional collaboration during trying times. The funds raised through Sukuk Prihatin were used to enhance connectivity of schools in rural areas, facilitate business operations of MSMEs (focused on female-led enterprises), and support research on fighting infectious diseases.

Among the key factors driving the issuance of Sukuk Prihatin were:

- High deposit rates among Malaysians. According to BNM's key indicators for financial inclusion, deposit accounts per 10,000 adults grew from MYR29,860 to MYR30,460 from 2011 to 2019.

- The Covid-19 pandemic was a major factor that consolidated common purpose among Malaysians for collaboration to revive the collapsing economy and establish a digital platform where corporations and individuals could channel their contributions to the predetermined purposed, as approved by the financial regulators, and with less bureaucracy that would normally slow the approval and distribution of the funds raised through the issuance.

A key result of Sukuk Prihatin is that it galvanised many industry stakeholders to explore and experiment with the notion of issuing digital sukuk. One notable lesson was that issuance of sukuk should be direct, with clarity of purpose, and that a digital platform played a key role for managing subscriptions and communication of relevant narratives, as well as utilizing relevant contract structures to facilitate interaction and operability among stakeholders and counterparties.

However, issuance of Sukuk Prihatin was not the norm and it was an extraordinary effort under a unique circumstance. Despite its success, policy makers, financial institutions, and key players in the sukuk market are still sceptical of the idea of utilizing a private-sector digital platform to facilitate sustainable and viable issuance of micro-sukuk that is affordable and purpose-built for MSMEs' business growth and scalability.

Another case of successful implementation of FinTech is the establishment of Islamic Finance Knowledge Repository (I-FIKR) by ISRA Institute, a subsidiary of INCEIF University, a post-graduate university owned by the BNM. The knowledge repository was established in 2010, and it has successfully positioned itself as the primary one-stop resource for information, research references, and Shariah resolutions in relation to Islamic finance, capital market and economics. I-FIKR is being used as one of the main reference sources by various central banks, securities commissions, Shariah and ethical boards of banks and capital market intermediaries, and the Accounting and Auditing Organization for Islamic Financial Institutions (AOIFI).

I-FIKR is being enhanced through deployment of generative and explainable AI features to broaden its capability, including, among other things, alignment of Shariah principles (especially Fiqh Muamalat) with the environmental, social and governance (ESG) requirements. It is expected that the upgraded version of I-FIKR would enable future Shariah-compliant innovations to be more comprehensive by encompassing broader perspectives such as viability, ethical considerations, and technology requirements as its output, as well as cognitive learning loop capability for continuous self-learning.

Regulatory and Compliance Considerations

The regulatory landscape of the Islamic capital market in Malaysia is at an advance stage. As a leader in many aspects, Malaysia has two financial regulators, namely, the BNM and the SC that drive the advancement of both financial and capital markets.

BNM's primary focus is on banking, insurance, payments, monetary and fiscal strategy, and government economic policy levers, as well as the systemic risks in management of financial institutions.

The SC's key focus is on the capital market ecosystem, investors' confidence and protection, exchanges' operational robustness, fair intermediation and trading, and information transparency.

Malaysia's unique dual financial regulatory regime – conventional regulations based on English common law, and Shariah regulations based on the Fiqh Muamalat principles –has benefited Malaysia greatly as it provides greater flexibility for experimentation, interpretation, and perspective for variety of issues to be solved innovatively. As an example, the creation of sukuk as an alternative to bonds has

positioned Malaysia as the leader for several decades. It provides Malaysia with creativity that others may not even consider as additional options in solving financial issues, evidenced by the digital issuance of Sukuk Prihatin. Another example is the establishment of Islamic banking that is regulated independently from conventional asset and liability management (ALM) principles. One of the key differences is the allowance for Islamic banks to utilize a certain percentage of depositors' funds (subject to prior consent by each depositor) in a profit-sharing investment between the bank and its depositors; such arrangement is not permissible for conventional banks. This unique provision allows Islamic banks to collaborate with suitable licensed capital market institutions and use profit-sharing Islamic contracts to enhance depositors' income, on top of the typical ALM strategy. Such collaboration between financial and capital market regulations has provided Malaysia with the dynamic to expand and/or collaborate where needed.

Nonetheless, in ensuring compliance with both regulatory bodies, Shariah-compliant institutions are compelled to invest in competent resources, technology solutions and operations. Among the additional requirements are, first, to establish an internal compliance function that supervises adherence with relevant Shariah requirements, and second, to conduct periodic independent reviews to address findings and remedial actions.

Conclusion

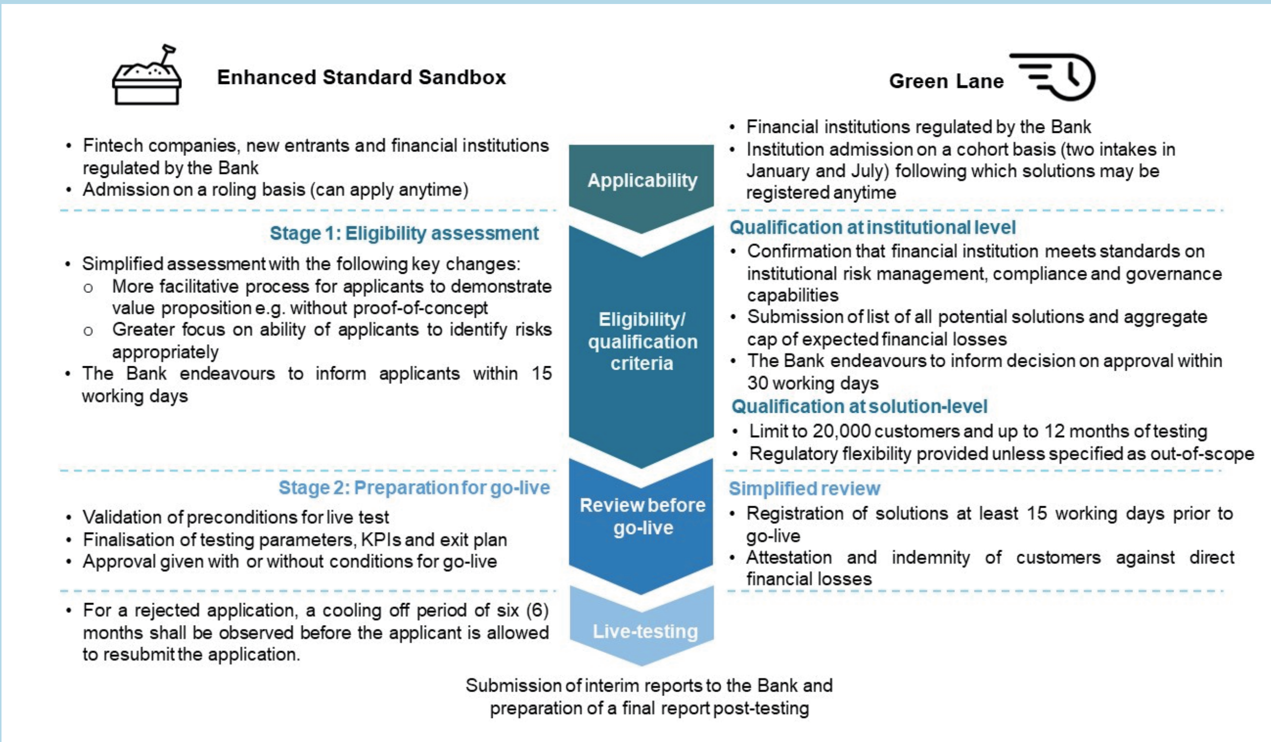
Malaysia is well-established in the Islamic finance and capital market arena. As the leader in this space, the main challenge is staying ahead of other countries and continuously innovating rather than chasing the pack.

As the global dynamics are shifting away from the typical norm, Malaysia is at a crossroads – whether to continue as an expert user of innovative solutions built by others or to move towards being the originator of solutions based on the first principle thinking approach. Adopting the existing stance would put Malaysia somewhere at the middle of the pack, i.e., as a neutral country rarely seen as a rival. However, the alternative is to have Malaysia become viewed differently by other countries, which would require shifts of mindset, strategy, and action plans.

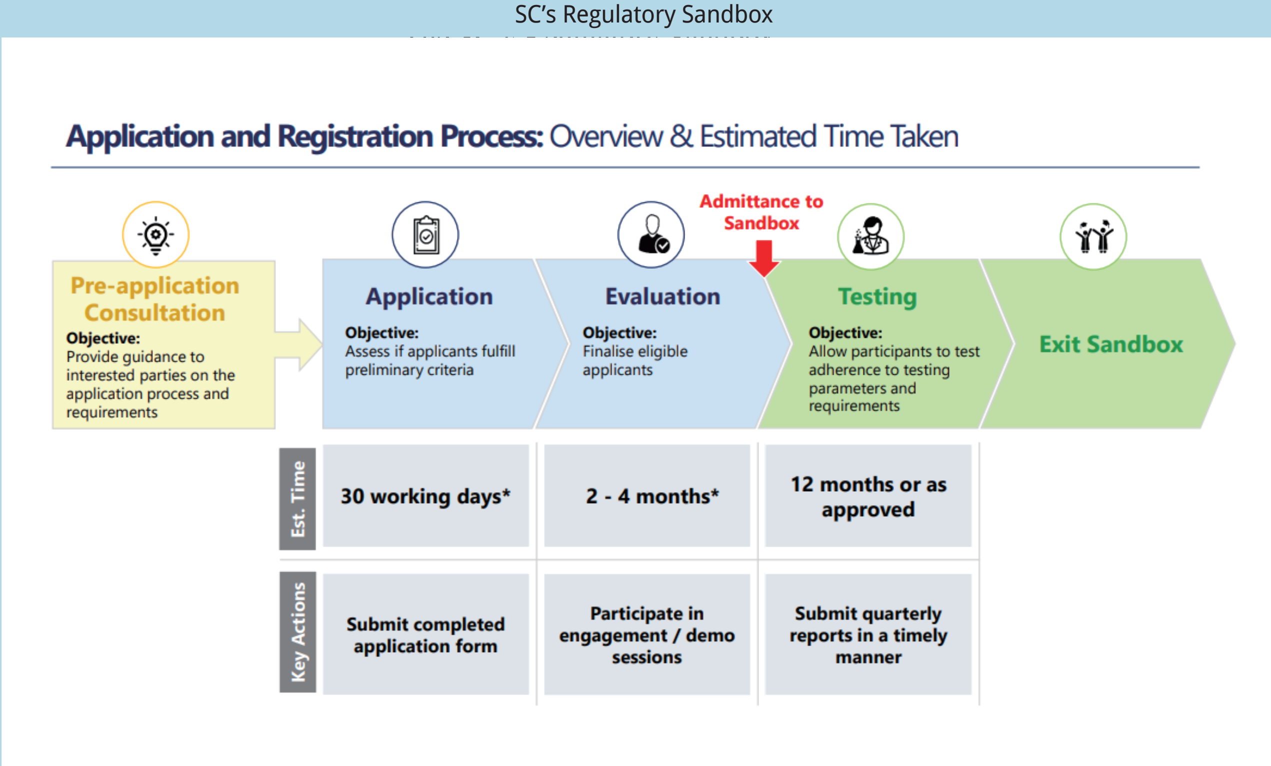
Islamic finance and capital market capability, coupled with ESG alignment is a great advantage that could benefit Malaysia, both on its own and especially in collaboration with the emerging nations of the ASEAN region. The versatility of Fiqh Muamalat with relevant narratives would facilitate Malaysia's navigating the choice between remaining as is or shifting towards being an originator of innovation. Having said all of the above, the Islamic finance and capital market in Malaysia could be different going forward.

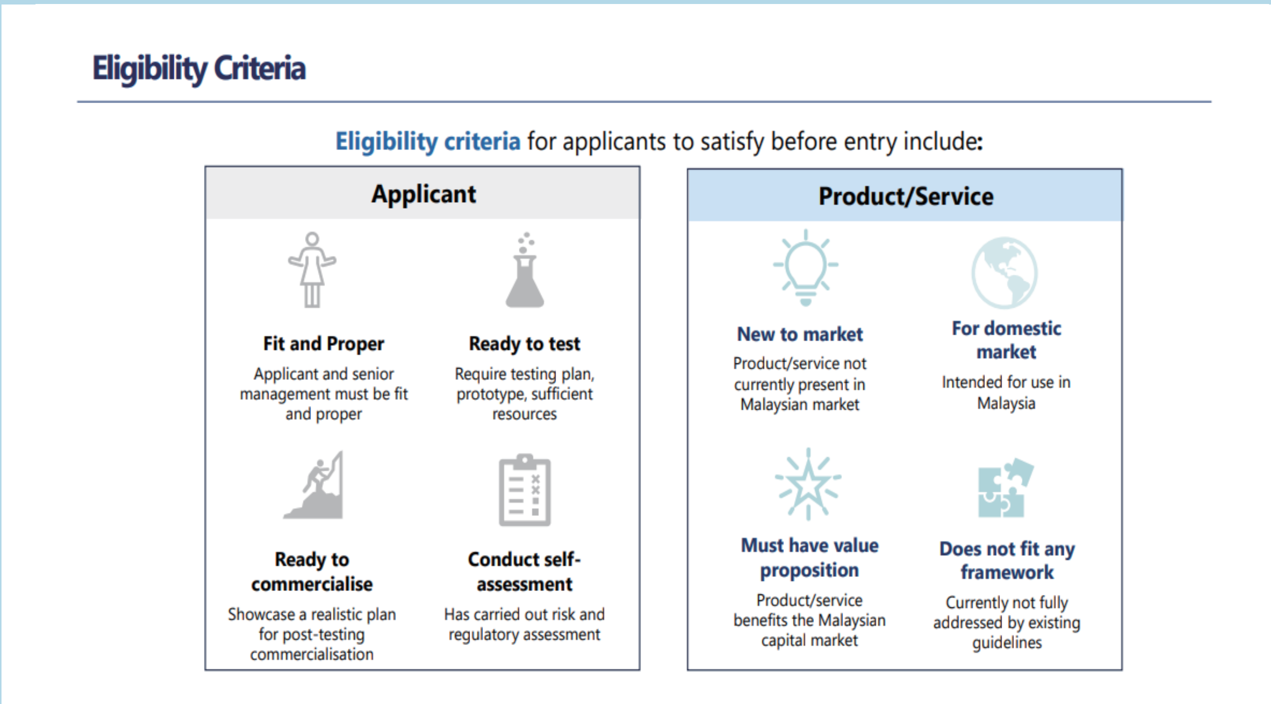
Appendix

BNM's Regulatory Sandbox



SC's Regulatory Sandbox





Source: BNM, SC

Notes

1 Source: BNM, "Regulatory Sandbox."

2 Source: SC, "Regulatory Sandbox."

3 Source: Fintech News Malaysia, "Malaysia Fintech Report 2024."

4 Source: WTW, "Unlocking potential: Board diversity can help drive business success," 1 April 2025.

5 Source: CIMB Securities, "Malaysia market outlook by CIMB Securities," 28 June 2024.

6 Source: RTGS.global, "RTGS.global completes another successful instant settlement cross-border transaction between five banks across Georgia, Tajikistan and Uzbekistan," 26 February 2024.

7 Source: "What Is a Sukuk? Sharia-Compliant Bond-Like Financial Instruments," *Investopedia*, 8 June 2024.

8 Source: FitchRatings, "Malaysia's Debt Capital Market Likely to Slow on Fiscal Consolidation; Sukuk Leadership Sustained," 19 March 2025.

9 Source: SC, "Guidelines on categories of sophisticated investors," 5 February 2024.

10 Source: Malaysia International Islamic Finance Centre "Malaysia's first digital sukuk," 4 February 2021.

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Mohammad Ridzuan Abdul Aziz has over 25 years of commercial, regulatory compliance and technology experience in Malaysia and the Asia-Pacific region. On financial technology (FinTech), Ridzuan is a member of the Fintech Association of Malaysia advisory board, with focus on raising Malaysia's unique combined values of a mature onshore FinTech eco-system, nimble Labuan mid-shore framework and wealth of depth and breadth from the Islamic digital economy ecosystems.

Ridzuan is currently an independent director of WorldRemit Malaysia, a subsidiary of a global cross-border digital remittance brand, Zepz. He is also an independent director with AEON Bank Berhad, the first Islamic digital bank in Malaysia. He also sits on the board at Dear Time Insuretech, Malaysia Rating Corporation Berhad, and Rolling Pay.

Ridzuan was also the Secretary General for the ASEAN Chapter of the Global Impact FinTech Forum, a global thinktank that focuses on FinTech initiatives with significant potential impacts, and a founding member of Faster Community focusing on MENA FinTech founders and business leaders.

Ridzuan graduated from the University of Wales, Aberyswyth with a BSc Economics, majoring in Accounting and Finance, and later obtained his MBA, specializing in Management Information Systems, from the International Islamic University Malaysia (2006).