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Regulatory Framework of Digital Bank and Islamic Digital Bank to Support Social Finance and Financial Inclusion in Malaysia

Azlin Suzana Salim[1], Mohd Masukujjaman[1], Hartinie Abd Aziz[2,*], Raja Madihah Raja Alias[2]

[1] Department of Accounting and Finance, Faculty of Business Management and Professional Studies, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, 40100 Shah Alam, Selangor, Malaysia
[2] Faculty of Law and International Relations, University Sultan Zainal Abidin Terengganu, Malaysia

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ABSTRACT

Malaysian Financial Inclusion Framework and Malaysian Financial Sector Blueprint led to establishment of digital bank and Islamic digital bank in Malaysia with financial inclusion objective to ensure Malaysian banking policy remain relevant in operationalization of digital bank. The Policy Document on Licensing Framework for Digital Banks issued by Bank Negara Malaysia 2020 clearly specified that licensed digital banks shall be subject to regulatory laws under the Financial Services Act 2013 (FSA 2013) and Islamic Digital Bank shall be subject to the regulatory laws under Islamic Financial Services Act 2013 (IFSA 2013) within the legal and regulatory framework of Bank Negara Malaysia. The aim of this research is to examine the laws and regulations for regulating Digital Bank and Islamic Digital Bank in Malaysia to support social finance in Malaysia. Doctrinal Legal Method is adopted by conducting library research on the primary legal sources and secondary legal source. The principal results disclosed that FSA 2013 and IFSA 2013 are the comprehensive law to regulate banking and finance in Malaysia covering the regulation and supervision of both digital bank and Islamic digital bank in Malaysia. These laws remain relevant for operationalization of digital bank and Islamic digital bank within the Financial Inclusion Framework and Social Finance Framework.

1. Introduction

The financial sector has undergone significant transformation with the advent of digital banking, an innovation that leverages technology to provide seamless and efficient banking services [1]. Digital banks, also known as neobanks, are fully online banks that operate without traditional physical branches, offering a wide range of financial services through digital platforms [2]. This shift towards digital banking has been particularly impactful in promoting financial inclusion by extending financial services to underserved and unbanked populations [3]. As digital banking continues to grow,

* *Corresponding author.*
E-mail address: hartinieabdaziz@unisza.edu.my

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regulatory frameworks play a critical role in shaping its development, ensuring security, stability, and inclusive growth [4]. The acceleration of digital finance is viewed as a key strategy to enhance the stability of the banking sector, fostering economic and financial resilience even during crises [4]. Furthermore, the emergence of fintech in the financial sector has driven a significant shift towards digitalization and sustainability, leveraging technologies such as AI to reduce environmental impact [5].

In the realm of Islamic finance, the emergence of digital banks presents both unique opportunities and challenges. Islamic banking, which operates in accordance with Shariah principles prohibiting interest (Riba), speculative activities (Gharar), and investments in certain industries, faces the task of adhering to these principles while leveraging digital platforms to offer innovative financial products and services [6]. Establishing Islamic digital banks requires a regulatory environment that not only supports digital banking innovations but also ensures compliance with Islamic financial principles [7].

While existing literature often addresses conventional digital banking or general Islamic banking regulations, there is a lack of targeted comparison of digital banking regulations [8]. The integration of Shariah compliance within the digital banking framework poses unique challenges and opportunities that require further investigation [9]. Understanding how regulatory frameworks can adapt to rapid advancements in financial technologies and changing market dynamics is crucial for the evolution of digital banking regulations in these countries [8].

Malaysia, with its predominantly Muslim population, faces the challenge of ensuring that Islamic digital banking aligns with Shariah principles while promoting financial inclusion [10]. The regulator in Malaysia, Bank Negara Malaysia, plays a crucial role in incorporating Shariah values and financial inclusion elements into the development of digital banking in the country [10]. Moreover, Malaysia needs to invest in digital skills development and innovation to enhance its competitiveness in the digital banking sector [11]. Furthermore, the adaptability of regulatory frameworks in response to the rapid advancements in financial technologies and changing market dynamics needs further investigation. Understanding how well these regulations can evolve to accommodate new innovations in digital banking is a crucial area of study.

In Malaysia, Financial Services Act 2013 (FSA 2013) and Islamic Financial Services Act 2013 (IFSA 2013) are the main laws regulating conventional banking and Islamic banking in Malaysia including establishment of new digital banks and Islamic digital banks [12,13]. On 31 December 2020, BNM has released the Policy Document on Licensing Framework for Digital Banks that provides framework for offering banking products and services to support Malaysia's underserved and unserved market segments wholly or almost wholly through digital or electronic means [14]. The 2020 Malaysian Policy Document defines licensed digital bank to means licensed digital bank under section 10 of the FSA 2013 to carry on digital banking business and licensed Islamic digital bank is Islamic digital bank licensed under section 10 of the IFSA 2013 to carry on Islamic digital banking business. Digital banking business is interpreted under the said policy document to mean banking business as defined in section 2(1) of the FSA which is carried on wholly or almost wholly through digital or electronic means. Islamic digital banking business is further interpreted to means Islamic banking business as defined in section 2(1) of the IFSA 2013 which is carried on wholly or almost wholly through digital or electronic means. The 29 applications for digital banking license have been submitted to BNM on 30 June 2021 and only five applicants have been granted licenses by BNM in 2022 [13].

2. Overview of Regulatory Landscape

2.1 Regulatory Landscape for Digital Bank and Islamic Digital Bank in Malaysia

Malaysia has been at the forefront of Islamic banking and financial innovation. For Islamic digital banks, Malaysia provides a robust regulatory framework under the Islamic Financial Services Act (IFSA) 2013. This act ensures that Islamic financial institutions, including digital banks, adhere to Shariah principles while operating within a modern financial system. BNM's guidelines mandate comprehensive governance, risk management, and AML/CFT requirements, ensuring that digital banks operate securely and effectively. Additionally, Malaysia's advanced technological infrastructure supports the growth and operationalization of digital banks.

The regulatory body, Bank Negara Malaysia (BNM), has issued specific frameworks for digital banks, including the "Licensing Framework for Digital Banks" (2020). This framework is designed to promote innovative and inclusive financial solutions, with a strong emphasis on reaching underserved and unserved populations. The regulatory environment in Malaysia is more conducive to the development of digital banks, featuring lower initial capital requirements and specific operational guidelines tailored to the unique aspects of digital banking.

In Malaysia, the Minister of Finance and Bank Negara Malaysia decided to issue only up to five (5) licenses of digital bank with the regulatory requirement that digital banks are only allowed to establish a sole registered office and may enter into the Shared ATM Network and provide servicing via an agent. Digital bank and Islamic digital banks are not allowed to establish physical branches within Malaysian financial inclusion framework. The assessment criteria shall be based on operational readiness on organizational structure, policies, procedures and controls, compliance management framework, IT and accounting systems and BCP 2. Digital banks are required to provide a comprehensive 5-year business plan that includes financial, managerial and organizational resources to support business strategy and continuity plan. In addition, digital banks are also required to obtain independent external assurance to validate the business plan The main objectives of regulating the establishment of digital bank and Islamic digital bank in Malaysia are to offer banking products and services to address market gaps in the underserved and unserved segments, to promote easier and affordable access to financial solutions and to create strong value propositions of financial system stability without jeopardising depositors' interest.

The consortium of the digital bank must comprise of a company that has an aggregate interest in shares of more than 50% or exercise control over the proposed licensed person. It should be an existing licensed person under FSA 2013 or IFSA 2013, a financial holding company approved under the FSA or IFSA 2013 and if a foreign institution regulated by a supervisory authority outside Malaysia which exercises functions corresponding to those of the Bank under the FSA 2013 or IFSA 2013. There is no requirement for directorship and fee restrictions.

BNM had required the digital bank to issue minimum paid-up capital of RM100 million during the foundational phase and shall achieve a minimum capital fund of RM300 million at the end of the fifth year. In order to be successful applicants in the application process of the digital bank, Bank Negara Malaysia assessments are based on credible business plan, technology infrastructure and efficient operations to support the strategic and financial aspirations , sound organisational and governance structures; profiles of key personnel (directors, management and shareholders) showcasing competence, integrity and sound financial standing, robust frameworks, policies, procedures and controls to ensure ongoing identification, measurement, communication, monitoring and management of risks and ongoing regulatory compliance.

In 2023, Bank Negara Malaysia developed 2nd Financial Inclusion Framework 2023 – 2026 to align with the Financial Sector Blueprint 2022 – 2026 among other to ensure Malaysian banking policy, laws and regulation remain relevant in operationalization of digital bank towards achievement of financial inclusion objectives [15,16].

2.1 Comparison between Digital Bank and Islamic Digital Bank in Malaysia

List of Digital Bank and Islamic digital bank licensed in Malaysia are listed in Table 1, 2 and 3.

Table 1
List of approved digital bank in Malaysia

Successful Applicant in 2021 to be licensed as Digital Bank under FSA 2013	Licensed Digital Bank under FSA 2013 in operation as at January 2026
1. Consortium of Boost Holdings Sdn. Bhd. And RHB Bank Berhad	Boost Bank Berhad
2. Consortium led by GXS Bank Pte. Ltd. And Kuok Brothers Sdn. Bhd.	GX Bank Berhad
3. Consortium led by Sea Limited and YTL Digital Capital Sdn Bhd.	YTL Digital Bank Berhad (Ryt Bank)

Source: Author's interpretation

Table 2
List of approved Islamic digital bank in Malaysia

Successful Applicant in 2021 to be licensed as Digital Bank under IFSA 2013	Licensed Islamic Digital Bank under IFSA 2013 in operation as at January 2026
1. Consortium of AEON Financial Service Co., Ltd., AEON Credit Service (M) Berhad and Money Lion Inc.	AEON Bank (M) Berhad
2. Consortium led by KAF Investment Bank Sdn. Bhd..	KAF Digital Bank Berhad

Source: Author's interpretation

Table 3
List of digital bank licensed and in operation in Malaysia

Registered Name	Date of BNM Approval to commence operation as Digital Bank	Licensing Law
AEON Bank (M) Berhad	15 January 2024	Licensed Islamic Digital Bank under IFSA 2013
Boost Bank Berhad	15 January 2024	Licensed Digital Bank under FSA 2013
GX Bank Berhad	1 September 2023	Licensed Digital Bank under FSA 2013
YTL Digital Bank Berhad (Ryt Bank)	25 August 2025	Licensed Digital Bank under FSA 2013
KAF Digital Bank Berhad	8 August 2025	Licensed Islamic Digital Bank under IFSA 2013

Source: (BNM,2026)

3. Methodology

This study aims to examine the gap in digital bank regulatory environments by comparing the laws and regulations for establishing digital banks and Islamic digital banks in Bangladesh and Malaysia. The study further aims to recommend framework of Digital Bank for financial inclusion.

This research employs a combination of doctrinal legal methodology and qualitative methodology, specifically utilizing case study through extensive Malaysian policy on digital bank and financial inclusion to compare and contrast the regulations of digital bank and Islamic digital bank. Qualitative research is chosen for its strength in providing rich, in-depth insights into complex regulatory frameworks and their implications. Researchers utilizing qualitative methods build findings inductively, from raw data to a conceptual understanding [17]. Given the novelty of the research topic, there is a shortage of empirical studies directly addressing this area, further justifying the use of qualitative methods. The use of qualitative research designs informed by social theory can help bridge the gap between rigor and relevance, allowing for a deeper understanding of the perspectives of regulatory practitioners [18]. The research is conducted through extensive library research, ensuring a comprehensive examination of the relevant literature and legal documents. The source of information includes various primary and secondary sources such as legislative texts, academic journals, government reports, government policy, books and monographs, industry publications, and online databases. The library research also extends to include grey literature—such as these, dissertations, working papers, and conference proceedings—as well as expert opinions obtained through published interviews, commentaries, and opinion pieces. This comprehensive approach ensures a thorough examination of the regulatory framework of digital bank and Islamic digital bank.

4. Findings and Discussion

4.1 Regulatory Requirement for Digital Bank and Islamic Digital Bank in Malaysia

In Malaysia, the Minister of Finance and Bank Negara Malaysia decided to issue only up to five (5) licenses of digital bank with the regulatory requirement that digital banks are only allowed to establish a sole registered office and may enter the Shared ATM Network and provide servicing via an agent. Digital bank and Islamic digital banks are not allowed to establish physical branches within Malaysian financial inclusion framework. The assessment criteria shall be based on operational readiness on organizational structure, policies, procedures and controls, compliance management framework, IT and accounting systems and BCP 2. Digital banks are required to provide a comprehensive 5-year business plan that includes financial, managerial and organizational resources to support business strategy and continuity plan. In addition, digital banks are also required to obtain independent external assurance to validate the business plan The main objectives of regulating the establishment of digital bank and Islamic digital bank in Malaysia are to offer banking products and services to address market gaps in the underserved and unserved segments, to promote easier and affordable access to financial solutions and to create strong value propositions of financial system stability without jeopardizing depositors' interest.

The consortium of the digital bank must comprise of a company that have an aggregate interest in shares of more than 50% or exercise control over the proposed licensed person. It should be an existing licensed person under FSA 2013 or IFSA 2013, a financial holding company approved under the FSA or IFSA 2013 and if a foreign institution regulated by a supervisory authority outside Malaysia which exercises functions corresponding to those of the Bank under the FSA 2013 or IFSA 2013. There are no requirements for directorship and fee restrictions.

Table 4
Regulatory requirement of digital bank and Islamic digital bank in Malaysia

Criteria	Malaysian Digital Bank and Islamic Digital Bank
Approval Authority	Bank Negara Malaysia (BNM)
Licenses	Up to five licenses available
Capital Requirements	Minimum paid-up capital of RM100 million during foundational phase; RM300 million by the end of the fifth year
Branch Restrictions	Digital banks can only establish a sole registered office; no physical branches allowed
Service Network	Can join the Shared ATM Network and provide services via agents
Business Plan	Must provide a comprehensive 5-year business plan, including financial, managerial, and organizational resources
External Assurance	Required to obtain independent external assurance to validate the business plan
Ownership And Control	Consortium must include a company with more than 50% shareholding or control, and be a licensed entity under FSA 2013/IFSA 2013
It Infrastructure	Not explicitly detailed, but assumed to be part of the broader regulatory compliance framework assessed by BNM
Cybersecurity Measures	Not explicitly detailed in the provided context
Data Protection	Expected to comply with standard banking regulations, including AML/CTF measures
AML/CFT Compliance	Assumed to be part of the broader regulatory requirements
KYC Procedures	Expected to comply with standard banking regulations, including AML/CTF measures
Regulatory Reporting	Regular submission of reports to BNM
Audit Requirements	Assumed to be part of the regulatory framework
Financial Inclusion Objectives	Addressing market gaps, promoting financial inclusion, and ensuring system stability without jeopardizing depositors' interests

Central to this framework are specific capital requirements that digital banks must adhere to, ensuring they maintain sufficient financial resilience. This includes mandates on minimum paid-up capital and capital adequacy ratios, which serve as vital buffers against potential financial shocks. A cornerstone of the regulatory requirements is the emphasis on robust IT infrastructure. Digital banks are mandated to have secure servers, employ encryption standards, and establish disaster recovery plans. These measures are critical in safeguarding the integrity and availability of digital banking services. Complementing this, comprehensive cybersecurity protocols are enforced, necessitating regular security audits to proactively identify and mitigate potential threats. Compliance with data protection laws is also non-negotiable, underscoring the commitment to safeguarding customer information against breaches and unauthorized access.

While the framework does not impose explicit restrictions on the establishment of physical branches or the integration into shared ATM networks, digital banks must still demonstrate operational readiness. This involves meeting stringent regulatory standards and showing a capacity to provide seamless and secure banking services. The absence of specific requirements for shared ATM networks or agent-based servicing suggests a flexibility that allows digital banks to innovate and adapt their service delivery models as per their operational strategies and market needs. The regulatory landscape places a significant emphasis on anti-money laundering (AML) measures and know-your-customer (KYC) procedures. Digital banks are required to implement rigorous customer due diligence and continuous transaction monitoring to detect and prevent illicit activities. This robust framework ensures that digital banking operations are aligned with global standards for financial integrity and security.

4.2 Islamic Financial Services Act 2013

Islamic Financial Services Act 2013 (IFSA 2013) is the law that provide for the regulation and supervision of Islamic financial institutions to ensure Shariah compliance. Islamic digital bank is required by law to carry out Islamic digital banking business under the purview of BNM and to comply with the legal requirements and Shariah requirements of IFSA 2013.

Section 2 of IFSA 2013 provides the detailed definitions on the term Islamic banking business to mean the business of

(a) accepting Islamic deposits on current account, deposit account, savings account or other similar accounts with or without the business of paying or collecting cheques drawn by or paid in by customers; or
(b) accepting money under an investment account; and
(c) provision of finance; and
(d) such other business as prescribed under section 3 of IFSA 2013.

The term "Islamic deposit" is defined in the same section as a sum of money accepted or paid in accordance with Shariah. Section 3 of the Act further provides that the Minister of Finance has the power to prescribe any business activities as an addition to the definition of Islamic banking business upon recommendation of BNM. The term "provision of finance" as provided in (c) of the definition of "Islamic banking business" is defined to include the list Islamic financing and retail banking businesses permissible under IFSA 2013 as listed under Table 5.

Table 5
List of Islamic Financing and retail banking business that are permissible to be carried out by Islamic Digital Bank within the definition of provision of finance under Section of IFSA 2013

IFSA 2013	Definition of Provision of Finance
Section 2 definition of Provision of Finance (a)	*(a) Equity or partnership financing including musyarakah, musyarakah mutanaqisah and Mudarabah.*
Section 2 definition of Provision of Finance (b)	*(b) Lease based financing, including al-ijarah, al-ijarah muntahia bi al-tamlik, and al-ijarah thumma al-bai'.*
Section 2 definition of Provision of Finance (c)	*(c) Sale based financing, including, istisna'; bai'bithaman ajil, bai' salam, murabahah and musawamah.*
Section 2 definition of Provision of Finance (d)	*(d) Currency exchange contracts.*
Section 2 definition of Provision of Finance (e)	*(e) Fee based activity, including wakalah*
Section 2 definition of Provision of Finance (f)	*(f) Purchase of bills of exchange, certificates of Islamic deposit or other negotiable instruments*
Section 2 definition of Provision of Finance (g)	*(g) The acceptance or guarantee of any liability, obligation or duty of any person*

Source: Author's interpretation

Islamic Digital Bank should comply in all its operations, businesses, affairs and activities with Shariah by complying with the rulings of the Shariah Advisory Council (SAC) of BNM and BNM Shariah standards, ensuring internal policies and procedures are consistent with Shariah requirements; and developing a Shariah audit function. Section 28(3) of IFSA 2013 also regulates that where Islamic

Digital Bank becomes aware that it is carrying on any of its business, affair or activity in a manner which is not in compliance with Shariah or the advice of its Shariah committee or the advice or ruling of the SAC, the institution shall first, immediately notify BNM and its Shariah committee of the fact, second, immediately cease from carrying on such business, affair or activity and from taking on any other similar business, affair or activity; and third within 30 days of becoming aware of such non-compliance or such further period as may be specified by BNM, submit to BNM a plan on the rectification of the non-compliance [19]. Statutory Duties of Islamic Digital Bank as set out under Section 29 and 29 of IFSA 2013 are summarised in Table 5. In the event that Islamic digital banks fail to comply with the requirement of Section 28 and 29 of IFSA 2013, the enforcement undertaking will be taken by the BNM under Section 270 of IFSA 2013 whereby the Minister of Finance or BNM may accept a written undertaking from any person in relation to the matter under IFSA 2013 and may be used as an alternative means to address concerns instead of pursuing with other enforcement actions; with regard to the effect of breach, the Minister of Finance or BNM may obtain a high court order to enforce and seek specific performance and/or damages. In furtherance under Section 174 of IFSA 2013, the Islamic digital bank shall be subject to removal of director, chief executive officer or senior officer if no longer considered fit and proper in managing the Islamic digital bank or contributes to the contravention of BNM's direction or breach of enforceable undertaking and under Section 187-196 of IFSA 2013, the removal of non-viable banks by compulsory transfer of business and establishment of bridge institutions for compulsory transfer.

Pursuant to Section 245-257 of IFSA 2013, administrative actions and civil proceedings could also be taken where it appears to BNM that there is a reasonable likelihood that any person will contravene or has contravened, or will breach or has breached, or is likely to fail to comply with or has failed to comply with any provision of requirements in IFSA 2013, provisions of any regulation made pursuant to the Act, standards, condition, restriction, specification, requirement or code made or issued pursuant to any provision of IFSA 2013. BNM is authorised and empowered under Section 167 of IFSA 2013 to exercise its power if it appears that an institution, its director, chief executive officer or senior officer is carrying or about to carry its business, affairs and activities in a manner which is contrary to Shariah.

Islamic banking business including Islamic digital banking business are comprehensively regulated banking industry. Bank Negara Malaysia has taken seriously the Shariah non-compliance issues in order to ensure Shariah compliance. Section 28(5) and 29(6) provide serious offences and punishment for contravention of sections 28(1) or 28(3) or 29(1). The summary is provided in Table 6, Table 7 and Table 8.

Table 6
Statutory duties of Islamic digital Bank under IFSA 2013

Section 28 IFSA 2013	**Section 29 IFSA 2013**
Section 28(1) Statutory duty of Islamic digital bank to ensure that its aims and operations, business, affairs and activities are in compliance with Shariah. Section 28(2) Statutory duty of Islamic digital bank to comply with any ruling of Shariah Advisory Council of Bank Negara Malaysia to ensure Shariah compliance. Section 28(3)(a)	Section 29(3) Statutory duty of Islamic digital bank to comply with policy documents, guidelines and Shariah standards on Shariah matters issued by Bank Negara Malaysia.

Statutory duty of Islamic digital bank to immediately notify Bank Negara Malaysia and its Shariah committee on any Shariah non-compliance events. Section 28(3)(b) Statutory duty of Islamic digital bank to immediately cease from carrying on Shariah non-compliance businesses or activities. Section 28(3)(c) Statutory duty of Islamic digital bank to submit to Bank Negara Malaysia the rectification plan on Shariah non-compliance businesses or activities	Section 29(4) Statutory duty of Islamic digital bank to ensure its internal policies and procedures on Shariah Governance comply with Shariah standards issued by Bank Negara Malaysia.

Source: Author's interpretation

Table 7
Offences and punishment under for breach of statutory duties under IFSA 2013

The punishment for committing an offence under Section 28(1) or 28(3) of IFSA 2013: Shariah Non-compliance	**The punishment for committing an offence under Section 29(1) of IFSA 2013: Non-compliance with BNM Shariah standards**
Imprisonment for a term not more than 8 years; or	Imprisonment for a term not more than 8 years; or
A fine not exceeding RM 25 million; or	A fine not exceeding RM 25 million; or
both - Imprisoment for a term not more than 8 years and a fine not exceeding RM 25 million.	both - Imprisoment for a term not more than 8 years and a fine not exceeding RM 25 million.

Source: Author's interpretation

Table 8
Offences and punishment for breach of statutory duties under IFSA 2013 and Bangladesh regulations

Jurisdiction	Offence	Punishment
Malaysia	Section 28(1) or 28(3) of IFSA 2013: Shariah Non-compliance	Imprisonment for a term not more than 8 years; or A fine not exceeding RM 25 million; or both imprisonment for a term not more than 8 years and a fine not exceeding RM 25 million.
	Section 29(1) of IFSA 2013: Non-compliance with BNM Shariah standards	Imprisonment for a term not more than 8 years; or A fine not exceeding RM 25 million; or Both imprisonment for a term not more than 8 years and a fine not exceeding RM 25 million.

Source: Author's interpretation

4.3 Policy Framework on the Regulation, Licensing and Supervision of Digital Banks 2021

In 2021, the Alliance for Financial Inclusion (API) members based in Sasana Kijang Kuala Lumpur has published Policy Framework on the Regulation, Licensing and Supervision of Digital. The term 'digital bank' has been used, confusingly, for services provided by traditional banks through digital channels – digital banking or e-banking as well as for firms providing a limited set of financial services, such as e-money issuers and other digital financial services providers [20]. This policy framework defines a digital bank as a regulated financial institution that delivers a wide range of banking products and services, mostly through virtual means. The same definition is provided under Malaysian Policy Document on Licensing Framework for Digital Banks 2020. API has disclosed in the policy framework that the term digital bank varies according to different jurisdiction with the common interpretation that digital bank has no physical branches and carry the banking business through digital means virtually.

Table 9
Definition of digital bank according to jurisdiction

Authority	The Term Digital Bank	Digital Channels
Bank Negara Malaysia	Digital banks	Wholly or almost wholly virtual
Bangko Sentral Ng Pilipinas - Philippines	Digital banks	No physical branches. Notes, the regulation allows the provision of services through cash agents and other qualified service providers.
State Bank of Pakistan	Digital banks	Mostly virtual
Monetary Authority of Singapore	Digital banks	One physical place of business only
Hong Kong Monetary Authority	Virtual banks	Primarily virtual
Financial Services Commission – South Korea	Internet-only bank	Most virtual
Financial Supervisory Commission - Taiwan	Internet-only bank	Most virtual
European Banking Authority	Digital only institution	Mostly virtual but no physical branches
Financial Services Authority - Indonesia	Digital banks	Mainly through electronic channels without a physical office other than the head office or using a limited physical office
Bangladesh Bank	Digital banks	Primarily through online and mobile channels, without relying on a traditional brick-and-mortar branch network.

Source: Compilation of Alliance for Financial Inclusion, 2021

Ironically, digital banks are regulated within the existing traditional banking laws and regulations. The specific guidelines remain valid and applicable to digital bank. In order to achieve a specific objective of establishment of digital bank, they may request to obtain specific approval not to comply with specific regulatory requirements. In Malaysia, the digital banks are regulated under the specific guidelines and regulatory framework within the banking regulatory laws of FSA 2013 and FSA 2013. Digital banks in Malaysia are different from standard regulatory requirements. These include the requirements only common equity (Tier 1) allowed, no capital conservation or countercyclical capital buffers required, only standardized approaches allowed, simplified market risk-weighted asset schedule, minimum liquidity ratio of 25% of total liabilities, simpler than the standard liquidity coverage ratio, no stress testing requirements, exemption from public disclosures (Pillar 3) requirements and reduced range of acceptable collateral.

There are eight (8) key policies considerations on approaches to regulating digital banks:

1. The licensing framework must be based on financial inclusion objectives.
2. Fully licensed digital banks should be able to engage in the same range of activities as traditional banks, except running a branch network.
3. The positive aspects of allowing large non-financial firms to be significant shareholders of digital banks should be weighed against the risks of conflicts of interest in their lending activities.
4. Policies on digital banks should be technology neutral to allow lasting innovations subject to the overarching goals of protecting customers and stability of the financial system.

5. Restrictions on branches and other physical offices should be proportional, allowing digital banks to offer contact points to handle customers' complaints and special circumstances, such as inheritance or fraud.
6. Any regulatory forbearance introduced to promote digital banks, and their financial inclusion aims, must have an expiry date. Digital banks' stakeholders must have a clear timeline to close any regulatory gap with existing banks. This flexibility should also be tied to operational restrictions, thus providing a clear incentive for digital banks to prepare for the end of any regulatory benefit.
7. Regulations limited to digital banks such as capital add-ons, should be risk-based, aimed at their specific characteristics, while regulators should carefully avoid creating undesired outcomes.
8. There should be clear justification to define any product or service allowed exclusively to digital bank such as requiring lower operating costs, aimed at excluded groups, etc

In Malaysia, digital banks are expected to primarily cater the underserved and unserved. The commitment of digital banks to expand access to these segments will be part of a performance indicator. The product pricing must not be explicit. The products of digital banks should be designed to improve the overall financial well-being of the consumer. The financial products of digital banks should foster responsible usage towards digital financial education. Digital banks should be made aware that the regulatory authority expects products and services to be affordable and adapted to the economic capabilities of the underserved or potential customers who are excluded. Top executives, management and members of the board of digital banks should have robust technological skills to not only understand the inherent operational risks but to have a clear grasp of the technological change process.

Table 10
Policy framework of Malaysia

Aspect	Malaysia
Regulatory Authority	Bank Negara Malaysia (BNM)
Definition of Digital Bank	Digital banks deliver a wide range of banking products and services mostly through virtual means.
Licensing Framework	Up to five digital bank licenses available. Digital banks must obtain a license from BNM.
Capital Requirements	Minimum paid-up capital of RM100 million during the foundational phase, reaching RM300 million by the end of year five.
Operational Presence	Digital banks are allowed to establish only a sole registered office; no physical branches permitted.
Service Network	May enter into the Shared ATM Network and provide services via agents.
Business Plan and Assurance	Must provide a comprehensive 5-year business plan with independent external assurance to validate it.
Ownership and Control	Must include a company with more than 50% shareholding or control over the proposed entity, which must be an existing licensed entity or financial holding company under FSA 2013 or IFSA 2013, or a regulated foreign institution.
IT Infrastructure and Cybersecurity	Assumed to be part of the broader regulatory compliance framework assessed by BNM.
AML/CTF Compliance	Expected to comply with standard banking regulations, including AML/CTF measures.
Regulatory Reporting	Regular submission of reports to BNM, demonstrating compliance and operational performance.

Audit Requirements	Assumed to be part of the regulatory framework but not explicitly detailed.
Objectives and Goals	Addressing market gaps, promoting financial inclusion, and ensuring financial system stability without jeopardizing depositors' interests.
Policy Considerations	1. Licensing framework based on financial inclusion. 2. Fully licensed digital banks to engage in same activities as traditional banks, excluding branch networks. 3. Balancing benefits and risks of non-financial firm shareholders. 4. Technology-neutral policies. 5. Proportional restrictions on branches and physical offices. 6. Time-bound regulatory forbearance. 7. Risk-based regulations. 8. Justification for exclusive digital bank products/services.
Consumer Protection	Products should improve financial well-being, foster responsible usage, and be affordable and adapted to the underserved segments.

Source: Author's interpretation

4.4 Financial Inclusion Framework for Malaysia

Financial inclusion is the process of providing access to a wide range of financial services to individuals and businesses, enabling them to utilize these services for their financial needs in a responsible and sustainable manner. This concept involves ensuring that underserved and marginalized populations, such as low-income, rural, and undocumented communities, could access safe, convenient, and affordable financial services that are tailored to their requirements [21]. Financial inclusion aims to bridge the gap between those who have traditionally been excluded from the formal financial sector and the services it offers, allowing them to benefit from basic banking services like savings accounts, credit, insurance, and payment facilities [22].

The essence of financial inclusion lies in offering financial services that are not only accessible but also affordable and timely for individuals who have been historically underserved or excluded from the mainstream financial system [23]. By expanding access to formal financial services, financial inclusion seeks to empower individuals economically, enhance their welfare, and contribute to reducing income and wealth disparities [24]. Moreover, digital financial inclusion plays a crucial role in this process by leveraging digital means to reach financially excluded populations with a variety of financial services that meet their needs, all while being cost-effective for both customers and service providers [25]. Bank Negara Malaysia develops Financial Inclusion Framework 2023-2026 within the principle-based guidance on the financially unserved and underserved as stated in Table 11.

Table 11
Characteristics of unserved and underserved segments within Financial Inclusion Framework 2023-2026

Characteristics of unserved and underserved segments	Sub-category of unserved and underserved segments
1. Limited geographical accessibility	1.1 Reside in rural/remote/hard-to-reach areas 1.2 Reside in areas where Financial Access Points (FAPs) located >10km travelling distance away
2. Unable to conduct digital transactions	1.1 Need help with digital transactions or adoption of digital solutions due to lack of technological savviness or physical disabilities 1.2 Cannot afford internet subscription or smartphone 1.3 Reside in areas with poor digital connectivity

3. Difficulties obtaining financial services given risk profiles	3.1 Lack of documentation e.g. identity for verification, credit history/collateral/financial track record, or insufficient data or experience to support pricing of risks 3.2 No income/unemployed/inconsistent source of income 3.3 SMEs within financial institution's high-risk segments and/or segments with cautious/negative outlook
4. SME's in new growth areas	4.1 Not typically suited to traditional bank-based financing and/or risk protection solutions 4.2 Difficulty accessing financing and/or protection solutions due to information asymmetry or commercial viability concerns given the infancy stage of development
5. Vulnerable segments	5.1 Change in circumstances or life events resulting in financial hardship 5.2 Low ability to withstand financial shocks 5.3 Have capacity to make own decisions but require assistance to deal with financial institutions
6. Low financial literacy deterring effective take-up and usage of financial services	6.1 Lack access and capability to make use of financial education tools and resources 6.2 Lack awareness of the need for and the availability of suitable financial products and services 6.3 Lack knowledge and capability to use financial products and serves, particularly risk protection products

Source: Bank Negara Malaysia, 2023

4. Conclusions

Malaysia exhibits a strong commitment to enhancing financial inclusion, guided by Bank Negara Malaysia (BNM) that has developed a comprehensive national strategy to address financial inclusion, focusing on reaching underserved and unbanked populations. Malaysia emphasizes on financial literacy, launching various programs to educate the population about financial services and improving financial knowledge. Additionally, the adoption of digital financial services is strongly encouraged, with initiatives such as electronic Know Your Customer (e-KYC) and digital payment systems being promoted to streamline processes and facilitate transactions. Furthermore, Malaysia is attentive to financial inclusion, developing policies and programs to address the unique challenges faced by society in accessing financial services, thus promoting equality within the financial sector. The principal results disclosed that FSA 2013 and IFSA 2013 are the comprehensive law to regulate banking and finance in Malaysia covering the regulation and supervision of both digital bank and

Islamic digital bank in Malaysia. These laws remain relevant for operationalization of digital bank and Islamic digital bank within the Financial Inclusion Framework and Social Finance Framework.

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