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Digitalization of Islamic Banking in Indonesia: Justification and Compliance to Sharia Principles

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ABSTRACT

Technological sophistication is observed to be increasing the necessity for digitalization of Islamic banks in Indonesia to avoid being abandoned by their customers, as conventional banks rapidly advance their digital offerings and set higher expectations for financial services. However, these banks are required to comply with Sharia principles for their products and services. This study was conducted to analyze the justification of digitalization of Islamic banking system and compliance of the digital services implemented to Sharia principles. It employed doctrinal legal study methods. Data were retrieved from literature references and were analysed qualitatively using a conceptual and statutory approach. The results showed several reasons to justify digitalization of Islamic banking system and these include the current demand for digital products and services, the prevalence of the millennial generation, and the legal backing provided for the advancement in Indonesia. These principles mandate that Islamic banks must avoid practices involving maisir (gambling), gharar (obscurity), haram (prohibited activities), riba (usury), and zalim (injustice). This study is novel in its comprehensive analysis of how digitalization can be harmonized with Sharia principles in the Indonesian context, providing a unique legal and practical framework for Islamic banks aiming to modernize their services while maintaining religious compliance.

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1. Introduction

Technological development is encouraging digitalization in several aspects of life, including the finances specifically banking sector. It is observed from the fact that almost all conventional and Sharia banks are currently providing digital-based products and services to remain competitive in the industry.[1] There are presently only eleven conventional banks in Indonesia including: 1) Jenius, owned by BTPN and established in 2016, 2) Bank Jago, owned by PT Bank Jago Tbk, and established in 1992, 3) Digibank by DBS in 2017, 4) Blu by PT Bank Digital Bank Central Asia (BCA) in 2021, 5) PermataME by PT Bank Permata Tbk in 2018, 6) Danamon Save by PT Bank Danamon Indonesia Tbk in 2021, 7) Wokee by PT Bank Danamon Indonesia Tbk in 2021, 8) TMRW by PT Bank UOB Indonesia in 2020, 9) Neobank by PT Bank Neo Commerce (BNC) in 2021, 10) Line by PT Bank KEB Hana Indonesia in 2021, and 11) Superbanks owned by PT Super Bank Indonesia and introduced in 2023.[2] However, there are only two Sharia digital banks which are Bank Aladin Syariah and Jago Syariah. The PT Bank Aladin Syariah Tbk is the first purely digital bank in the country and was launched in 2022 through the development of a user ecosystem.[3] The purpose is to providefy the best benefits by signing retail partnerships with PT Sumber Alfaria Trijaya Tbk, Halodoc, Google, and the Hajj Financial Management Agency (BPKH). Meanwhile, Jago Syariah uses all conventional Jago banking features and services that do not violate Sharia principles.[4]

The theoretical framework of digitalization in banking is grounded in several key concepts. First is the Diffusion of Innovations Theory by Everett Rogers, which explains how, why, and at what rate new ideas and technology spread.[5] In the context of banking, this theory helps understand the adoption of digital banking services by both institutions and customers. Second is the Technology Acceptance Model (TAM), which posits that perceived usefulness and ease of use influence users' acceptance of technology.[6] In banking, this model elucidates why customers choose digital banking services over traditional methods. Third is the Resource-Based View (RBV), which suggests that banks must leverage their resources,[7] such as technological infrastructure and human capital, to gain a competitive advantage through digitalization.[8]

[1] Ria Tifanny Tambunan and M. Irwan Padli Nasution, 'Tantangan Dan Strategi Perbankan Dalam Menghadapi Perkembangan Transformasi Digitalisasi Di Era 4.0', *Sci-Tech Journal*, 2.2 (2022), 148–56. https://doi.org/10.56709/stj.v2i2.75.

[2] Fahrettin Pala and others, 'Analyzing the Linkage between Islamic Financial Literacy and Islamic Banking Services Adoption: Evidence from Turkey', *Journal of Islamic Accounting and Business Research*, 15.5 (2024), 784–817. https://doi.org/10.1108/JIABR-12-2021-0324.

[3] Muhammad Said Husni Shabri, Nur Azlina, 'Transformasi Digital Industri Perbankan Syariah Indonesia', *El-Kahfi | Journal of Islamic Economics*, 3.2 (2020), 1–8. https://doi.org/10.58958/elkahfi.v3i02.88.

[4] Nadia Andika, Lastuti Abubakar, and Tri Handayani, 'Implementation of Principle for Responsible Investment in Distribution of Bank Credits on Infrastructure Projects', *Legality : Jurnal Ilmiah Hukum*, 29.1 SE-Journal's Articles (2021), 130–43. https://doi.org/10.22219/ljih.v29i1.15063.

[5] Billy Spann and others, 'Applying Diffusion of Innovations Theory to Social Networks to Understand the Stages of Adoption in Connective Action Campaigns', *Online Social Networks and Media*, 28 (2022), 100201. https://doi.org/10.1016/j.osnem.2022.100201.

[6] Hashem Abdullah Alnemer, 'Determinants of Digital Banking Adoption in the Kingdom of Saudi Arabia: A Technology Acceptance Model Approach', *Digital Business*, 2.2 (2022), 100037. https://doi.org/10.1016/j.digbus.2022.100037.

[7] Abderaouf Bouguerra and others, 'Absorptive Capacity and Organizational Performance in an Emerging Market Context: Evidence from the Banking Industry in Turkey', *Journal of Business Research*, 139 (2022), 1575–87. https://doi.org/10.1016/j.jbusres.2021.10.077.

[8] Yordan Gunawan, Arif Budiman, and others, 'Journalist Protection on the Battlefield Under the International Humanitarian Law: Russia-Ukraine War', *Jurnal Hukum Unissula*, 39.1 (2023), 1–11. https://doi.org/10.26532/jh.v39i1.24685.

Several studies were observed to have been conducted on Islamic banking and Islamic digital banking. An example was the survey on the requirement to establish a digital bank in Indonesia by Danang Kurniawan (2023) and the results showed there were no specific rules or laws governing the process in the country.[9] It was suggested that a particular regulation should be formulated due to the significant differences the banks have with conventional banks. Moreover, Rosida (2022) reported that Islamic banks need to prepare to compete effectively in digitalization era by growing skills related to the use of Internet of Things (IoT) technology in the industry, implementing digital technology to encourage productivity and competitiveness, and applying technological innovation through the development of start-ups.[10] Sutikno et al. (2022) also examined the operations of Islamic banks in the digital age and identified some opportunities and challenges.[11] These include: 1) the convenience associated with the ease of transacting without having to visit a bank directly, 2) the perception of digital banking as Sharia concept based on Islamic religious teachings and considered significantly different from usury, and 3) the acceleration of the activities of Islamic banks in Malay as customers. Some of the challenges experienced were associated with the high level of competition against conventional banks and the need to always catch up with internet network delays.[12]

While existing literature discusses the general landscape of Islamic banking and the emergence of digital banking globally, there is a lack of specific research on the justification and compliance of digital products and services offered by Sharia banks within the Indonesian regulatory framework.[13] This research seeks to fill this gap by conducting the rationale and societal need behind the establishment of Sharia digital banks in Indonesia. It seeks to evaluate the extent to which these institutions adhere to the rigorous Sharia principles outlined in Law Number 21 of 2008 on Sharia Banking, which governs their digital products and services. This includes an in-depth analysis of how these banks integrate Islamic legal and ethical standards into their digital offerings. By scrutinizing these aspects, the research aims to provide insights into how Sharia digital banks can effectively meet the financial needs of the Muslim community in Indonesia while upholding religious compliance and ethical standards in the digital era. The intention of these principles is to apply Islamic law to banking activities based on *fatwas* which are formal rulings or interpretations provided by a qualified legal scholar or issued by institutions with relevant authority. The study was based on the argument that the digital products and services of Sharia banks were legally and religiously justified in Indonesia, considered important to the community, and observed not to be outdated or abandoned. It showed that the focus was on exploring the reasons for the establishment of these Islamic or Sharia digital banks and compliance of their products with Sharia principles

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[9] Wardah Yuspin, Danang Kurniawan, 'Menggagas Pendirian Bank Digital Di Indonesia: Sebuah Telaah Yuridis', *Jurnal Supremasi*, 13.1 (2023), 1–14. https://doi.org/10.35457/supremasi.v13i1.2158.

[10] Ika Nazilatur Rosida, 'Analisis Potensi Perbankan Syariah Di Indonesia Dalam Mempertahankan Eksistensi Pada Era Digital', *Human Falah: Jurnal Studi Ekonomi Dan Bisnis Islam*, 9.1 (2022), 118–32. https://doi.org/10.30829/hf.v9i1.11454.

[11] Yordan Gunawan, Yasir Perdana Ritonga, and others, 'Does the Protection of Minority Groups in Xinjiang Fail?', *Sriwijaya Law Review*, 4.2 (2020), 205–20. https://doi.org/10.28946/slrev.Vol4.Iss2.432.pp205-220.

[12] Sutikno Sutikno, Nursaman Nursaman, and Muliyat Muliyat, 'The Role Of Digital Banking In Taking The Opportunities And Challenges of Sharia Banks In The Digital Era', *Journal of Management Science (JMAS)*, 5.1 (2022), 27–30. https://doi.org/10.35335/jmas.v5i1.125.

[13] Hirsanudin Hirsanudin and Dwi Martini, 'Good Corporate Governance Principles in Islamic Banking: A Legal Perspective on the Integration of TARIF Values', *Journal of Indonesian Legal Studies*, 8.2 (2023), 935–74. https://doi.org/10.15294/jils.v8i2.70784.

to serve as the basis for the future development of these banks. The efforts were considered important because there are presently only two in the country despite the general immediate need for more conventional and Sharia digital banks by the public.[14]

2. Research Method

This study was conducted qualitatively using secondary data and doctrinal legal study methods. The data used were obtained from literature references such as books, journal articles, websites, and study results related to the topic. The obtained data were analyzed by employing statutory and conceptual approaches. Moreover, in-depth analysis was applied, and the results were presented descriptively and structurally within the frame of Islamic Sharia perspective. It was applied to ensure coherence and logical series connection between one part and another.

3. Results and Discussion

3.1. Digital Banking and Its Development in Indonesia

Digital banking is generally the process of digitizing all banking activities normally conducted in a physical bank branch such as the deposit, withdrawal, and transfer of money.[15] The concept is observed to be popular with the usage of smartphones and other mobile devices driven by the increasing introduction of digital devices and customer demand for financial services.[16]

Digital banking is commonly in the form of electronic, internet, and online banking. It is also explained as the simple and practical means of conducting financial transactions using digital instruments such as mobile payments and wallets (e-wallets), cryptocurrency, and electronic payments.[17] Amaliyah and Hartono (2022) also defined digital banking as the application of banking services that can be accessed through technology and information systems regardless of location or time.[18] It include activities such as deposits, withdrawals, and transfers of money, checking or savings account management, application for financial products, loan management, bill payments, and account services.[19]

The Financial Services Authority also explained digital banking services as the activities provided by banks through electronic or digital means and accessed independently by

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[14] Elsa Tiara, Dliyaudin Achmad, and Razie Bin Nasarruddin, 'An Analysis of Bank Syariah Indonesia Digitalization', *Talaa: Journal of Islamic Finance*, 3.1 (2023), 38–50. https://doi.org/10.54045/talaa.v3i1.718.

[15] Wardah Yuspin and others, 'Personal Data Protection Law in Digital Banking Governance in Indonesia', *Studia Iuridica Lublinensia*, 32.1 (2023), 99–130. https://doi.org/10.17951/sil.2023.32.1.99-130.

[16] Stephen Lumpkin and Sebastian Schich, 'Banks, Digital Banking Initiatives and the Financial Safety Net: Theory and Analytical Framework', *Journal of Economic Science Research*, 3.1 (2019). https://doi.org/10.30564/jesr.v3i1.1113.

[17] Wassan Abdullah Alkhowaiter, 'Digital Payment and Banking Adoption Research in Gulf Countries: A Systematic Literature Review', *International Journal of Information Management*, 53.February (2020), 102102. https://doi.org/10.1016/j.ijinfomgt.2020.102102.

[18] Hafidhotul Amaliyah and Djoko Hartono, 'Impact of Digital Shariah Banking Systems on Cash-Waqf amongst Muslim Millennials', *Budapest International Research and Critics Institute (BIRCI-Journal)*, 5.1 (2022), 3212–25. https://doi.org/10.33258/birci.v5i1.3977.

[19] Mei-Mei Lin and Fu-Hsiang Kuo, 'A Principal Component Analysis of Digital Banking Development in Taiwan', *Journal of Applied Finance & Banking*, 2023, 31–46. https://doi.org/10.47260/jafb/1342.

prospective and existing customers through digital media.[20] The concept provides an opportunity to obtain information, communicate, register, open accounts, transact, and close accounts. It also includes other information and transactions beyond banking products such as financial advisory, investment, e-commerce, and other needs of customers.[21]

The relevance of digital banking extends beyond the ease of online transactions, to larger economic and societal repercussions. It is critical to economic development since it allows for more efficient financial transactions, increases savings rates, and expands credit availability. These services are critical for personal financial management and have a substantial influence on the economic well-being of individuals and communities. Furthermore, the competitive pressure that digital banking brings to the financial sector drives innovation, resulting in better services and lower prices for customers.[22]

Today's Indonesians value digital banking services because they find banks to be convenient, which makes them happy. About 74% of Indonesians are estimated to have access to banking services, with the remaining individuals remaining unaffected by banking. Digitization makes it possible to access financial products and fiber optic to SMS banking. For this reason, banks take into account the ways in which customers can create accounts, save money, apply for loans, and utilize other banking services without physically visiting the relevant bank office. Banks view this as a chance to demonstrate their commitment to their clients by piqueing their interest and winning over new ones by offering the services that meet their requirements. Digital banking services have lately been adopted by the banking industry. The exponential growth of smartphones and mobile users is an opportunity that banks may leverage to propel digital banking forward. Islamic banks serve as social media platforms for mobile users.[23]

Technological development was observed to have led to the coloration of every financial activity by digital banking.[24] Customers enjoy certain benefits due to the convenience provided by the innovation but only a few Indonesians have this experience. The data from world financial institutions shows only 54% of Indonesians are using banking services despite the current belief of millennials that ATMs, mobile banking, Internet banking, and SMS banking are now commonplace or mainstream. Moreover, people are searching for methods to open accounts, save, apply for credit or loans, and explore other banking services without being physically present or coming directly to the bank. Digital banking allows banks to

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[20] Yordan Gunawan and Zulfiani Ayu Astutik, 'The Importance of Bilateral Agreement on Mandatory Consular Notification for Indonesia: Tuti Tursilawati Execution', *Jurnal Hukum Novelty*, 10.2 (2019), 85–100. https://doi.org/10.26555/novelty.v10i2.a13530.

[21] Sukron Mamun and Tri Hadmiatin Ningsih, 'Implementasi Strategi Layanan Teknologi Digital Banking Dan Service Quality Dalam Perspektif Nasabah Pada Perbankan Syariah (Study Kasus Pada Bank Syariah Mandiri KCP Tomang)', *Jurnal Ekonomi Syariah Pelita Bangsa*, 6.02 (2021), 223–33. https://doi.org/10.37366/jespb.v6i02.249.

[22] Uchenna Innocent Nnaomah and others, 'Digital Banking and Financial Inclusion: A Review of Practices in the Usa and Nigeria', *Finance & Accounting Research Journal*, 6.3 (2024), 463–90. https://doi.org/10.51594/farj.v6i3.971.

[23] Yordan Gunawan and Mohammad Hazyar Arumbinang, 'The Climate Change Litigation Based Human Rights Approach in Corporations: Prospects and Challenges', *Journal of Human Rights, Culture and Legal System*, 3.2 (2023), 288–307. https://doi.org/10.53955/jhcls.v3i2.116.

[24] Kantika Kantika, Florentina Kurniasari, and Mulyono Mulyono, 'The Factors Affecting Digital Bank Services Adoption Using Trust as Mediating Variable', *Journal of Business and Management Review*, 3.10 (2022), 690–704. https://doi.org/10.47153/jbmr310.4882022.

stimulate the interest and loyalty of prospective and existing customers through the customization of their services.[25]

Islamic banks are experiencing several challenges in the digital era but there are enormous opportunities due to their natural and undeniable appeal, bonds, psychological relaxation, increased production, accelerated flow of goods, and transparency.[26] Moreover, the development of these banks in Indonesia can be achieved through solid support from several Islamic and non-Islamic mass organizations in Indonesia. It can also be attained through the maintenance of contract principles in Sharia banks such as justice, welfare, constant improvement, and innovation of rigid products.[27] The transformation of Sharia banks into digital banks can significantly improve the interest of customers.

The development of digital banking services is observed to be driven by several factors including: 1) the rapid development of information technology, 2) changes in lifestyles of the people, 3) the public need for effective, efficient, accessible, easily comprehensive, and simple banking services, 4) competition within banking industry to provide the services needed by the community, and 5) the efficient and integrated operations.[28]

Digital bank innovation emerged in Indonesia due to technological developments that occur. Startups such as Tokopedia, Shopee, Gojek, Grab, and others have an influence on changing people's habits. Where transactions at startups encourage the use of electronic money more than before. As a result, in recent years many high-tech startups have entered the financial sector, capitalizing on the gaps in traditional bank services that are sometimes outdated due to the limitations of industry regulations, structure, and corporate culture.

3.2. Justification for Sharia Banking Digitalization

The present era is known as the digital age because all aspects of life have experienced digital transformation.[29] The trend is also observed in the financial sector, primarily among the conventional and Sharia banks. Digitalization has been associated with several risks related to cyber security, technology, and outsourcing but Islamic banks still need to digitize their products and services based on the following reasons.[30]

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[25] Nur Kholis, 'Perbankan Dalam Era Baru Digital', *Economicus*, 12.1 (2020), 80–88. https://doi.org/10.47860/economicus.v12i1.149.

[26] A. M. Abbasov, Z. F. Mamedov, and S. A. Aliev, 'Digitalization of the Banking Sector: New Challenges and Prospects', *Economics and Management*, 6.6 (2019), 81–89. https://doi.org/10.35854/1998-1627-2019-6-81-89.

[27] Zulfa Khoiriah and M. Irwan Padli Nasution, 'Perkembangan Perbankkan Syariah Di Era Ekonomi Digital', *Economic Reviews Journal*, 2.2 (2023), 172–80. https://doi.org/10.56709/mrj.v2i2.74.

[28] Annisa Indah Mutiasari, 'Perkembangan Industri Perbankan Di Era Digital', *Jurnal Ekonomi Bisnis Dan Kewirausahaan*, 9.2 (2020), 32–41. https://doi.org/10.47942/iab.v9i2.541.

[29] Muhammad Akbar Suharbi and Hendro Margono, 'Kebutuhan Transformasi Bank Digital Indonesia Di Era Revolusi Industri 4.0', *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, 4.10 (2022), 4749–59. https://doi.org/10.32670/fairvalue.v4i10.1758.

[30] Retno Dewi Pulung Sari and others, 'State Financial Losses as a Result of Environmental Damage', *Journal of Human Rights, Culture and Legal System*, 4.1 (2024), 121–48. https://doi.org/10.53955/jhcls.v4i1.136.

First, digitalization of Islamic banks with their products and services is based on the needs and demands of the customers, mostly the millennial generation.[31] Previous studies already proved that digitalization was an important determinant of service quality and general satisfaction of the present digital customers. It means the services of banks need to be developed in line with technological advancement. Therefore, digital banking was designed to meet more customer needs through the optimal use of digital technology in the form of devices and applications or software applied as the distribution channels.[32] It was important to ensure access at any time, from anywhere, and to minimize direct interaction with agents. Banking industry needs to develop business strategies to implement digital banking services, specifically those enabling prospective and existing customers to obtain information, communicate, register, open accounts, conduct transactions, close accounts, and collect funds. The focus should also be on financial consulting, investment, e-commerce, and other banking needs of their customers.

Digitalization of Islamic banking services is very necessary and there is a need to ensure the legacy of its anticipation survives. Business institutions can serve as a player or just a spectator in the process of implementing change. In the situation of operating as a player, the banks are required to be ready for a change in mindset, roles, and responsibilities associated with the new job, face competition, and embrace the new science.[33]

Moreover, one of the goals of digitizing banks is to ensure customer satisfaction which is the most essential factor in banking industry and the service sector.[34] It is necessary due to the possibility of customers moving quickly to another bank when they are not satisfied. Therefore, companies operating in the banking industry need to be creative in satisfying and increasing the loyalty of customers to improve profit margins. The competitive advantage of these banks needs to be perceived as beneficial by the customers.[35] Banking sector is observed to have a very bright future in the digital era, specifically when adequate attention is placed on technology and continuous innovation to provide convenience for customers. The sustenance of this strategy by Islamic banks can increase their closeness to the community in the future.[36] It means the banks are expected to develop increasingly with technological advancement.

[31] Muammar Bakry and others, 'How to Attract Millennials? Indonesian Sharia Banking Opportunities', *WSEAS Transactions on Business and Economics*, 18 (2021), 376–85. https://doi.org/10.37394/23207.2021.18.38.

[32] Muhammad Mufarih, Riyanto Jayadi, and Yovin Sugandi, 'Factors Influencing Customers to Use Digital Banking Application in Yogyakarta, Indonesia', *Journal of Asian Finance, Economics and Business*, 7.10 (2020), 897–908. https://doi.org/10.13106/jafeb.2020.vol7.no10.897.

[33] Abdus Salam Dz., 'Inklusi Keuangan Perbankan Syariah Berbasis Digital-Banking: Optimalisasi Dan Tantangan', *Al-Amwal : Jurnal Ekonomi Dan Perbankan Syari'ah*, 10.1 (2018), 63. https://doi.org/10.24235/amwal.v10i1.2813.

[34] Youssef Chetioui and others, 'Modeling the Socio-Economic Factors Affecting Islamic Insurance Adoption: A Structural Equation Modeling Analysis', *International Journal of Economics and Financial Issues*, 14.3 (2024), 106–14. https://doi.org/10.32479/ijefi.16047.

[35] Hafiez Sofyani and Emile Satia Darma, 'Effect of Architecture and Efficiency of Mobile Banking Application on the Intention to Continue Using Islamic Bank: Does Data Security Matter?', *Journal of Islamic Marketing*, 15.6 (2024), 1479–97. https://doi.org/10.1108/JIMA-07-2023-0220.

[36] Muhammad Muflih and others, 'Customer Loyalty to Islamic Mobile Banking: Evaluating the Roles of Justice Theory, Religiosity, Satisfaction and Trust', *International Journal of Bank Marketing*, 42.3 (2024), 571–95. https://doi.org/10.1108/IJBM-03-2023-0187.

Second, Indonesian laws and regulations justify digitalization of Islamic banks as showed in *Otoritas Jasa Keuangan* (Financial Services Authority, abbreviated as OJK) Regulation No. 21 of 2023 on the Digital Banking Services by Commercial Banks. The regulation outlines the scope and requirements for digital services, the procedures for obtaining digital service licenses, collaboration in providing digital services, the use of IT, electronic signatures, the adoption of IT to support bank business functions, as well as customer protection and personal data protection.

The "bank" in the provisions means both conventional and Islamic banks. Therefore, Islamic banks can also provide electronic or digital banking services in line with the General Provisions in Article 1 Paragraph (1) of OJK Regulation Number No. 21 of 2023 states that " A Commercial Bank, hereafter referred to as "Bank," is a financial institution that conducts business activities either conventionally or based on sharia principles, providing payment traffic services. This includes branches of banks headquartered abroad and sharia business units. "It is reinforced by Article 20 (1) of Sharia Banking Law that "In addition to conducting business activities as referred to in Article 19 Paragraph (1), Sharia Commercial Banks may also: f. carries out bank activities or products based on Sharia Principles using electronic means." Furthermore, Article 20 Paragraph (2) Letter d states that "In addition to conducting business activities as referred to in Article 19 Paragraph (2), Sharia Business Unit (UUS) may also: d. carry out bank activities or products based on Sharia Principles using electronic means;" These explanations show that the digital services provided by Islamic and Sharia banks are legal and recognized by the State.

Chapter II on Digital Services by Banks outlines the scope and requirements for digital services. Article 2 states that digital services can be provided either solely by the bank or in partnership with another bank based on a cooperation agreement, and must align with the bank's business activities as stipulated by regulatory provisions. Article 3 mandates that banks offering digital services must possess IT infrastructure and management capabilities that can optimally support the provision of these services. Article 4 clarifies that banking services utilizing IT for public information dissemination and communication with customers or potential customers, without involving transactions or account access, are not considered banking products as defined by the Financial Services Authority regulations on commercial bank products.

According to the legal situation regarding the interaction between clients and digital banks, the service provider must give terms and conditions to users or customers throughout the account opening procedure. They function as a type of contract between the user or client and the service provider. An agreement is defined as an action taken by one or more parties to bind themselves together in Article 1313 of the Indonesian Civil Code. The terms and conditions of digital banking services are legally binding on the parties, as stated in Article 1338 of the Indonesian Civil Code, which also indicates that all agreements formed validly apply as law to the makers.

Third, Islamic Sharia does not prohibit digitalization but rather encourages the process due to the benefits it provides. For example, Islam has rules, principles, and guidelines related to *muamalat* required to be followed in the relationship between humans and their neighbors. Meanwhile, digital banking and banking digitalization need to follow Islamic commercial law requirements and Islamic legal maxims inter alia:

a. *Al-Ashl fi al-Asy yai al-ibahah hatta yadulla al-dalil 'ala al-tahrim* which means “It is easier for a bad thing to be permitted until evidence shows that it is prohibited.” The rule expresses the nature of Islamic affection for its people by stating that the original law is permissible for everything including deeds, goods, or things. It further shows that any item or activity can be done, consumed, and used except there is no reason for its prohibition. The concept shows Islam accommodates several uncountable things. Meanwhile, the provision of any reason to prohibit a certain activity or object can lead to halal, *makruh* (dislike), or even *haram* (prohibited). Such activities are expected to be avoided and the item should not be used or consumed. The application of the rule to digitalization of Islamic banks shows there is no reason to prohibit the concept, thereby showing its justification in Sharia.[37]

b. *Al-Mashlahah al-Mursalah* which is etymologically *a mashlahah* (benefit/goodness) left unchecked. It is explained as the benefit or goodness without explicit propositions for acceptance or rejection It strictly means digitalization process benefits from the silence of the Qur'an and Hadith. Therefore, *al-Mashlahah al-Mursalah* can be used as a basis to realize the good desired by humans to avoid *madharat* (danger/damage). The idea of *mashlahah* is to achieve benefits and eliminate harm, preserving the aims and objectives of Sharia.[38] It means the idea is considered good by common sense due to its ability to bring good and avoid bad (damage) for humans in line with the purpose of the laws established by Sharia. From the perspective of upholding the integrity of Islamic Sharia to establish justice, benefit, mercy, and wisdom, it is important to abstain from anything that leads to evil, futility, and cruelty to ensure the balance between benefits and harms remains constant in the rationale of *al-Mashlahah al-Mursalah*.[39] It shows the possibility of applying this concept to digitalization of Islamic banks because there is no popular evidence from the Quran and Hadith that commands or prohibits the process. However, the benefits and virtues of the process are real and considered important to humans without violation of principles and methods of Islamic Sharia.[40]

c. *Al-Hikmah Dhallatul Mukmin* which translates to wisdom or goodness is the lost property of the believer is the beginning of the hadith provided by the Prophet (peace be upon him). The statement fully reads that "wisdom or goodness is the lost property of the believer, wherever he gets it, he is the one who is most entitled to it." It shows that every good or valuable thing, including technological advancement and digital skills, is perceived as a lost item owned and most entitled to a believer when it is found. Principles can also be applied to the issue of digitalization of Islamic banks because the process is good and beneficial to the people in the community. The acceptance and justification indirectly show that Islam is not anti-progress and development. It further shows that Islamic law covers everything and is considered appropriate for all ages. Furthermore, the

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[37] Adil Saleem and others, 'Financial Intermediation through Risk Sharing vs Non-Risk Sharing Contracts, Role of Credit Risk, and Sustainable Production: Evidence from Leading Countries in Islamic Finance', *Environment, Development and Sustainability*, 26.5 (2023), 11311–41. https://doi.org/10.1007/s10668-023-03298-7.

[38] Fajri Matahati Muhammadin, 'Executing War Captives Based On Maslahat: Reflecting On And Concluding The Contemporary Debate', *UUM Journal of Legal Studies*, 14.1 (2022), 215–36. https://doi.org/10.32890/uumjls2023.14.1.9.

[39] Husni Mubarrak, 'Penalaran Istiṣlāḥī Dalam Kajian Fikih Kontemporer: Studi Kasus Fatwa Hukum Imunisasi Di Aceh', *AHKAM : Jurnal Ilmu Syariah*, 17.1 (2017). https://doi.org/10.15408/ajis.v17i1.6225.

[40] Muhammad Chairul Huda and Budi Ispriyarso, 'Contribution of Islamic Law in the Discretionary Scheme That Has Implications for Corruption', *Ijtihad: Jurnal Wacana Hukum Islam Dan Kemanusiaan*, 19.2 (2019), 147–67. https://doi.org/10.18326/ijtihad.v19i2.147-167.

rejection of digitalization is expected to outdate Islam because its laws do not cover the events associated with the rapidly developing world.[41]

3.3. Sharia Digital Bank Compliance with Sharia Principles

Research conducted by Ashari et al. in 2022 highlights the presence of sharia violations within Sharia Rural Banks (*Bank Pembiayaan Rakyat Syariah* or BPRS). Although these violations are minimal, they pertain primarily to the failure of BPRS due to speculative activities and transactions involving elements of uncertainty *(gharar)*. This study was executed by gathering data through questionnaires filled out by auditors who possess the necessary competence and capability to provide insights and factual accounts of occurrences within BPRS. These auditors had experience auditing the closing balances of liquidated Sharia BPRS multiple times, providing a robust foundation for the study's findings. The research surveyed five auditors who had conducted audits over the past five years, specifically from PT BPRS Al Hidayah and PT BPRS Gotong Royong. This survey was administered via Google Forms, sent to the auditors through email. The responses provided critical insights into the operational lapses and compliance issues within these institutions, underlining the importance of stringent adherence to sharia principles to prevent speculative practices and uncertainty in transactions.[42]

Sharia digital banks are required to always comply with and follow Sharia principles defined in Article 1 Number 12 of Law Number 21 of 2008 on Sharia Banking as "the application of Islamic law in banking activities based on the *fatwas* issued by relevant institutions." It is important to state that the Indonesian Ulema Council through the National Sharia Council of the Indonesian Ulema Council (DSN MUI) is a collective *fatwa* authority or *ijtihad* institution. Sharia principles are not comprehensively explained in banking Law but more detailed in the Explanation to Article 2 of Sharia principles that "business activities based on Sharia Principles, among others, are those that do not contain elements of: a. usury which is the unauthorized addition of income (vanity) in transactions related to the exchange of similar goods without equal quality, quantity, and delivery time *(fadhl)*, or in a lending and borrowing transaction requiring the Facility Recipient Customer to return the funds received more than the principal due to the passage of time *(nasi'ah)*; b. *maisir,* which is a transaction that depends on an uncertain and fortuitous situation; c. *gharar*, i.e., transactions whose object is unclear, not owned, unknown to exist, or cannot be delivered at the time the transaction is carried out unless otherwise regulated in Sharia; d. haram, i.e., transactions whose objects are prohibited in Sharia; or e. tyranny, i.e., transactions that cause injustice to others."[43]

Sharia principles required to be adhered to by Islamic and Sharia digital banking are "free from usury, *maisir*, *gharar*, haram, and tyranny." Previous studies agreed on this position with a slight modification which focused on replacing the tyranny aspect with *batil* (void/invalid) and it led to the abbreviation of principles to *maghrib* to present *maisir*, *gharar*, *haram*, *riba,* and

[41] Ibrahim Musa Unal and Ahmet Faruk Aysan, 'Fintech, Digitalization, and Blockchain in Islamic Finance: Retrospective Investigation', *FinTech,* 1.4 (2022), 388–98. https://doi.org/10.3390/fintech1040029.

[42] Hasan Ashari, Trinandari Prasetyo Nugrahanti, and Reny Fitriana Kaban, 'What Is a Violation of Sharia Principles or Governance the Cause of Sharia Bank Liquidation in Indonesia', *International Journal of Economics, Business, and Entrepreneurship*, 5.2 (2022), 76–86. https://doi.org/10.23960/ijebe.v5i2.198.

[43] Rudy Haryanto and others, 'Customer's Responses to Changes in Islamic Banking Service Post Covid-19 Pandemic in Indonesia', *International Journal of Religion*, 5.6 (2024), 553–61. https://doi.org/10.61707/vy7ksc16.

batil.[44] Meanwhile, the Financial Services Authority only mentions three Sharia principles prohibited in Islamic banking operations on its official website, and these are explained as follows:

a. *Maisir:* The direct translation of the word based on the language means "easy" but the term can also be understood as making a profit without working hard. *Maisir* is often known as gambling because the process usually allows a person to quickly gain profits or losses. Therefore, gambling is forbidden in the practice of Islamic finance, as mentioned in the word of Allah that "O believers, *khamar*, *maisir*, idols, casting lots with arrows, are heinous deeds of Satan, so stay away from them to be successful" (QS Al-Maaidah: 90). The prohibition of *maisir* by Allah SWT is due to its adverse effects, for example, a person engaged in gambling can either make higher profits than the efforts made when lucky or experience a considerable loss when unlucky. It means gambling does not follow principles of fairness and balance, leading to its prohibition in Islamic financial system. For instance, certain digital investment platforms might offer cryptocurrency trading services that operate on volatile market conditions, resembling gambling due to the speculative nature and potential for substantial gains or losses without productive economic activity.
b. *Gharar*: The direct translation of the word according to the language means "bet" but the term can also be understood as obscurity, betting, or gambling. Any transaction that needs clarification, within its power of attorney, or out of reach is believed to be *gharar*. For example, buying birds in the air, fishing in the water, or buying livestock while in the womb of its mother. For instance, in digital banking, *gharar* could manifest in transactions where there is uncertainty about the fulfillment of contractual obligations or the nature of financial products offered. An example includes ambiguous terms in investment contracts or financial agreements that lack clarity, potentially leading to disputes or unfair outcomes. The concept can present significant harm to the life of a person because it is a practice focused on taking advantage of others mentally. Therefore, it is prohibited in some verses and hadiths such as "and let not some of you eat the property of others among you in a vanity way and (do not) you take (the dealing) of the property to the judge so that you can eat part of the property of others by sin, even though you know" (Al-Baqarah: 188)
c. *Riba*: The term is explained as an addition, excess, growth, or increase, and is technically defined as the income falsely obtained on a principal property or capital. Any activity considered usury has been agreed by scholars to be haram because the Almighty Allah forbids eating usury manifold in Sura Ali Imran verse 130. An agreement is required from the outset that *riba* be prohibited among Muslims and the participation in the transactions containing the act is perceived as a grave sin. It is mainly because Sharia is primarily sourced from the Qur'an and the Sunnah that condemn usury. It means the differences between the meaning and elements of *riba* should be avoided to ensure economic activities are in line with the teachings of Sharia. For instance, *riba* can manifest in digital banking through interest-bearing loans or investments that guarantee fixed returns, which are not permissible under Shariah law.

[44] Dayah Abdi Kulmie, 'Musharakah Financing: Profitability Improvement Tool for Islamic Banks', *International Journal of Religion*, 5.6 (2024), 609–19. https://doi.org/10.61707/mzpevj08.

As stated in Article 28D Paragraph (1) of the Indonesian 1945 Constitution, sharia principles and ethics established through fatwas and issued by relevant institutions[45] (in this case, DSN MUI) are a form of legal certainty, protection, and guarantee for Muslims seeking the economic life implemented by Islamic Sharia. It indicates that the fundamental ideas guiding Sharia banking regulations originate from the fatwas formed by scholars who, as members of MUI, possess exceptional skills in their respective domains and come from a variety of organizations and backgrounds.[46] Additionally, the team comprises professionals with expertise in banking, economics, accounting, capital markets, insurance, Bank Indonesia (BI), OJK, law, and the Supreme Court. The pattern demonstrated that fatwas are formulated from multiple angles to offer legal assurance and stability to those involved in carrying out Islamic banking operations.Sharia compliance is a manifestation of the fulfillment of Sharia principles by Sharia banks considered to have the required characteristics, integrity, and credibility. Compliance culture is in the form of values, behaviors, and actions that support the creation of Sharia banks in line with all Bank Indonesia regulations.[47] An example is the requirement in banking Law that the business activities, products, and services of Islamic banks need to comply with Sharia principles thoroughly and consistently. Meanwhile, any form of non-compliance is designed to attract administrative sanctions.[48]

Sharia compliance is part of an excellent Islamic banking governance system because the management is required to be distinct in fulfilling Sharia principles, specifically in the process of implementing the intermediation function. At the operational level, the collection and distribution of public funds need to be based on these principles. Therefore, Sharia compliance is one of the elements normally used in assessing the health level of Islamic banks. The maintenance of a better level is directly proportional to sustaining public trust, thereby showing the possibility of losing the trust when the banks are negligent in applying principles. Moreover, the importance of Sharia compliance is to increase Sharia knowledge and create creative product and service innovations while working in line with DSN rules.

National Sharia compliance standards are designed based on the *fatwas* of the DSN MUI and the provisions of Islamic Financial Services Board (IFSC) on an international scale.[49] It is necessary because Sharia compliance is an integral part of risk management in Islamic banks and the scope is not limited to the implementation of contracts but also the efforts to realize Sharia *Maqashid*.[50]

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[45] Muhammad Khaeruddin Hamsin, Rizaldy Anggriawan, and Farisma Jiatrahman, 'Unveiling Ethical Implications: AI Robot Accountability in Islamic Context', *Jurnal Media Hukum*, 30.2 (2023), 117–35. https://doi.org/10.18196/jmh.v30i2.18524.

[46] Mohammad Talha, Syed Mohammad Faisal, and Ahmad Khalid Khan, 'Shariah Law in Commercial Banking and Stock Market: Recent Development, Challenges and Practices', *International Journal of Religion*, 5.6 (2024), 620–30. https://doi.org/10.61707/4brms430.

[47] Muneer Ahmad, Muhammad Bilal Zafar, and Abida Perveen, 'Consumer Shift Behavior from Conventional to Islamic Banking: Decision-Making Analysis through AHP', *Journal of Islamic Marketing*, 15.5 (2024), 1280–1302. https://doi.org/10.1108/JIMA-02-2023-0036.

[48] Agus Waluyo, 'Kepatuhan Bank Syariah Terhadap Fatwa Dewan Syariah Nasional Pasca Transformasi Ke Dalam Hukum Positif', *Inferensi*, 10.2 (2016), 517. https://doi.org/10.18326/infsl3.v10i2.517-538.

[49] Aini Maslihatin and Riduwan Riduwan, 'Analisis Kepatuhan Syariah Pada Bank Syariah: Studi Kasus Bank Pembiayaan Rakyat Syariah', *Jurnal Maps (Manajemen Perbankan Syariah)*, 4.1 (2020), 27–35. https://doi.org/10.32483/maps.v4i1.47.

[50] Andrew Shandy Utama, 'Arah Kebijakan Pengawasan Terhadap Perbankan Syariah Dalam Sistem Perbankan Nasional Di Indonesia', *Volksgeist: Jurnal Ilmu Hukum Dan Konstitusi*, 3.1 SE-Articles (2020), 41–52. https://doi.org/10.24090/volksgeist.v3i1.3498.

DSN is authorized to issue Islamic economic *fatwas* as a guideline for Islamic financial institutions to conduct their activities.[51] However, is the DSN-MUI *fatwa* binding or required to be followed by Islamic banking institutions? The analysis of the current practice of Islamic banking activities in Indonesia shows that the concept is binding and followed by all the relevant institutions. The DSN-MUI can warn any erring institution to stop an activity considered to be deviation. The body can also propose to the relevant agency, in this case, the Financial Services Authority, to take firm action when the warning is not heeded.

Islamic banks have an organizational structure with special authority for supervision to ensure that policies, procedures, products, and services are followed and subject to Sharia regulations. Sharia Supervisory Board (*Dewan Pengarah Syariah*, abbreviated to DPS) is charged with this responsibility regulated through strict legal provisions in Indonesia. It means the DPS is strategically positioned in the laws and practices of Islamic financial industry, specifically in relation to the creation and enforcement of Sharia compliance as the main element to ensure the existence and continuity of business.[52] The members of the board are required to have mastered banking economics and have experience in *fiqh muamalah*. Meanwhile, it has been discovered that Sharia compliance is often violated due to the weakness of the board supervising the risk management practices of these banks. It can lead to reputational risk with the capacity to influence the image and credibility of Islamic banks as well as a reduction in public confidence in the operations of the bank.

Sharia compliance is also supervised in Sharia digital banks to ensure Sharia principles are not violated in their operations.[53] For instance, violations of Shariah principles in digital banking may include engaging in transactions involving *riba* (usury), *gharar* (uncertainty), or *haram* (prohibited activities) that are not compliant with Islamic finance guidelines. It means the business activities of these banks are required to be based on the regulations of the Bank Indonesia, *fatwas* of the DSN, and applicable laws and regulations Law Number 21 of 2011 on the Financial Services Authority in Article 5 requiring OJK to organize a regulatory system and supervise all activities in the financial sector. The focus is usually on the health and prudential principles as well as other related businesses of these banks.[54]

4. Conclusion

In conclusion, the digitalization of Islamic banking in Indonesia is driven by several factors, including customer demand, regulatory support, and adherence to Sharia principles mandated by Sharia Banking Law. The digital-based products and services offered by Sharia digital and Islamic banks must comply with these Sharia principles, ensuring alignment with

[51] Yogi Muhammad Rahman and others, 'Digital Asset/Property Legal Protection in Sharia Banking Financing and Its Role in Indonesian Economic Development', *International Journal of Criminal Justice Sciences*, 16.2 (2021), 149–61. https://doi.org/10.5281/zenodo.4756067.

[52] Yordan Gunawan and Yovi Cajapa Endyka, 'The Protection of Small and Medium Enterprises in Yogyakarta: The Challenges of ASEAN Economic Community', *Pertanika Journal of Social Sciences and Humanities*, 25.October (2017), 199–206.

[53] Rizaldy Anggriawan and others, 'Passenger Name Record Data Protection under European Union and United States Agreement: Security over Privacy?', *Hasanuddin Law Review*, 8.2 (2022), 95–110. https://doi.org/10.20956/halrev.v8i2.2844.

[54] Putri Anggia, Ani Yunita, and Fadia Fitriyanti, 'Legal Justice: The Abolition of the Principle of Bank Secrecy for Tax Interests in Indonesia', *Jambura Law Review*, 5.2 (2023), 314–31. https://doi.org/10.33756/jlr.v5i2.18793.

Islamic finance regulations. As a pivotal sector in Indonesia's economy, Islamic banking plays a crucial role in facilitating financial transactions and supporting economic activities, thereby meeting market demands for convenient payment solutions and enhancing the digital economy. The implementation of digital banking activities, such as ATM, internet, mobile, video, phone, and SMS banking, demonstrates ongoing innovation aimed at meeting customer needs.

To ensure the reliability of Islamic digital banking operations controlled by systems, it is essential to test their liability through rigorous regulatory oversight and technological audits. Indonesian laws governing digital banking, including Sharia Banking Law Number 21 of 2008, provide the legal framework for these operations. Mitigating Shariah and legal risks in digital banking requires continuous monitoring, adherence to ethical standards, and robust internal controls. Moving forward, further research could explore enhanced regulatory frameworks and technological solutions to mitigate risks and ensure Sharia compliance in digital banking. This study contributes to the government agenda on digital banking by highlighting the importance of regulatory clarity and innovation in advancing Indonesia's digital economy agenda.

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