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The role of Islamic banks in developing a Sharia-based economy in the digital era in Indonesia

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ABSTRAK

Introduction

The digital era in Indonesia has significantly affected the financial industry, including Islamic banks. Islamic banks operate based on Islamic Sharia principles, offering banking services that comply with Islamic law, such as prohibiting usury (interest) and other Sharia principles. They provide various types of financing, including mudharabah and musharakah, as well as financial products, such as savings accounts, current accounts, and deposits.

Objectives

This study examines the role of Islamic banks in developing a Sharia-based economy in Indonesia, focusing on the challenges and opportunities presented by the digital era.

Method

This study uses a literature review to investigate the role of Islamic banks in developing a Sharia-based economy. This research involves searching, processing, and analyzing data from various relevant and reliable literature sources. Thematic analysis was used to identify patterns and key themes based on previous research findings.

Results

Islamic banks play a crucial role in Sharia-based economic development and contribute significantly to Indonesia's economic growth. They enhance the investment sector through third-party funds (TPF) and increase financing through the distribution of funds to the public (PYD). Shariah principles, such as murabahah, mudharabah, and musharakah, form the basis of financing offered by Islamic banks. Key opportunities include increased accessibility, product innovation, and operational efficiency. However, challenges such as Sharia compliance, customer awareness, and cybersecurity were also analyzed.

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Implications
The results suggest that Islamic banks can design strategies to optimize the benefits of the digital era while addressing its challenges. The findings emphasize adapting to digital advancements to maintain competitiveness and relevance in the financial industry.

Originality/Novelty
This study provides insights into integrating Islamic principles with modern banking practices in the digital era. It highlights the dynamic role of Islamic banks in promoting economic growth while adhering to Sharia principles.

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INTRODUCTION

Basically, banks function as financial intermediaries that connect individuals with fewer funds to those with more funds. The primary role of Islamic banks is to collect funds from the public in the form of deposits and then redistribute them to society in the form of financing, as explained in Law Number 21 regarding financing (Kharisma et al., 2023). The idea of establishing Islamic banks emerged in several Islamic countries, such as Egypt and Pakistan, following the establishment of the first Islamic bank in Malaysia in the 1940s to manage Hajj pilgrimage funds in a non-conventional manner (Muhammad & Nugraheni, 2022; Mulawarman & Kamayanti, 2018; Muthaler, 2019).

Islamic banking first emerged in Indonesia in 1992 with the establishment of Bank Muamalat Indonesia. Subsequently, the growth of Islamic banking accelerated with the support of regulations, such as the Islamic Banking Law enacted in 1998. Since then, many conventional banks have also opened Islamic business units or converted their status into Islamic banks. The development of Islamic banking in Indonesia has continued to rise in line with the growing public awareness of the importance of Sharia-based finance.

Today, numerous Islamic banks offer various financial products and services in compliance with Sharia principles, such as financing, savings, investments, and more. With stronger regulatory support and increasing public awareness, the development of Islamic banking in Indonesia is expected to continue expanding and making a significant contribution to the country's economy (Ghozali et al., 2019; Lebdaoui & Wild, 2016). In recent years, the growth of Islamic banks has gained global attention due to their role in expanding financial inclusion and providing financial solutions that align with religious principles for both Muslims and non-Muslims. An Islamic bank is a financial institution that operates based on Islamic Sharia principles (Amalia & Hanifuddin, 2021; Franzoni & Ait Allali, 2018; Grassa, 2015).

Islamic banks offer banking services that comply with Islamic law, including the prohibition of riba (interest) and adherence to other Sharia principles. An Islamic bank is a financial institution that operates in accordance with Islamic principles, particularly those related to Sharia law. In its operations, the bank follows Sharia principles in transactions and investments while avoiding interest-based transactions. Instead, Islamic banks adhere to ethical standards and implement profit-sharing arrangements (Al-Hunnayan, 2020; Bitar et al., 2018; Ilyas, 2018).

The primary objective of Islamic banks is to provide financial services while maintaining compliance with Islamic ethics and laws. They offer various types of financing, such as mudharabah and musharakah, as well as financial products like savings accounts, deposits, and current accounts. These banks also emphasize Islamic principles in their operations. Generally, Islamic banking functions in an ethical and Sharia-compliant manner. In addition to adhering to Islamic legal principles, these banks offer products and services that differ from conventional banks, such as profit-sharing-based financing and the prohibition of interest (Aman, 2019; Haridan et al., 2018; Ullah et al., 2018).

Based on the Sharia principles offered by Islamic banks, the development of Islamic banking in Indonesia faces several challenges (Nastiti & Kasri, 2019; Yustiardhi et al., 2020). These include the lack of evenly distributed supporting infrastructure for Islamic banking operations and limited public understanding of how the system works. Therefore, Islamic banks must play a crucial role in building the economy based on the Sharia principles desired by the Indonesian people.

The development of Indonesia's economy has undergone a long and dynamic process. As the first Islamic bank in Indonesia, Bank Muamalat Indonesia (BMI) was established, marking the beginning of rapid growth in the country's Islamic banking sector. In response to this growth, the Indonesian government enacted Law Number 21 of 2008 on Islamic Banking, which regulates Islamic commercial banks and Islamic rural banks (Khasanah, 2020). This regulation aligns with the needs of society and further supports the expansion of Islamic banking in Indonesia. Due to the ever-increasing economic demands and persistent inflation that continues to put pressure on the rupiah, solutions based on Islamic principles are needed to further develop the economy. Islamic banks can play a crucial role in empowering the economy, as they focus on principles of justice, sustainability, and adherence to Sharia law (Hasibuan et al., 2022; Kalkavan et al., 2021; Miftahorrozi et al., 2022; Tok & Yesuf, 2022).

Therefore, this study aims to explore the role of Islamic banks in economic development in the digital era. The rapid advancement of technology in Indonesia has significantly impacted the transformation of the financial services industry. In the midst of the current digital era—marked by a surge in internet usage and the widespread penetration of smartphones across Indonesia—financial institutions now have a golden opportunity to leverage digital platforms. Through these digital innovations, they can reach, serve, and fulfill the financial needs of society more efficiently and inclusively.

As the digital era progresses, Indonesia has witnessed a dramatic rise in internet usage and smartphone penetration. This phenomenon presents a valuable opportunity for financial institutions to adapt and expand their services through digital channels. Among all financial institutions, Islamic banking holds a unique role—not only in providing traditional financial services but also in ensuring that every product, service, and transaction strictly adheres to Sharia principles (Setiawan & Mugiyati, 2023).

An Islamic bank is a financial institution based on Sharia law. Its function is to connect individuals or entities with surplus funds to those in need of financing. This type of bank helps allocate unused funds to those who require them, benefiting all parties involved (AlShattarat & Atmeh, 2016; Daly & Frikha, 2016; Hussain et al., 2016). Islamic banking is thoroughly regulated under Law No. 10 of 1998, which serves as an improvement to Law No. 7 of 1992 on banking. Since the enactment of this law, Islamic banks have experienced significant growth. Law No. 10 of 1998 clearly outlines the legal framework and types of banking activities that Islamic banks are permitted to conduct. Over time, Islamic banking has gradually gained the attention of Indonesians across different genders and social classes (Hamidi et al., 2019).

The Industry 4.0 era represents rapid development and transformation across all aspects of industrial activities and human life through the utilization of digital technology and the internet. Industry 4.0 also encompasses systematic manufacturing operations by leveraging wireless technology and big data, allowing for more accurate data processing through server-based systems and integrating all components to function automatically (Kitsios et al., 2021; Santoso et al., 2021; Tambunan & Nasution, 2022). Based on the definitions above regarding the opportunities and challenges of Islamic banking in the digital era, it can be concluded that while there is significant growth potential, Islamic banks must adapt quickly and strategically to navigate the dynamics of the digital age.

Islamic banks play a crucial role in the economic development of Indonesian society. As time progresses, operational efficiency in the banking system has become increasingly important. Therefore, there is a growing need to establish a banking system that can efficiently and optimally support exports. In the context of competition with conventional financial institutions, Islamic banks have the opportunity to strengthen their position in the market. One key approach to modernizing and enhancing the banking system is leveraging technological advancements, particularly in today's digital era. Information technology has opened new opportunities and transformed how people interact with banking services (Barata, 2019; Nugrohowati et al., 2020; Thaker et al., 2021).

According to data from the Indonesian Internet Service Providers Association (APJII) in 2022, approximately 78.19% of Indonesia's population is connected to the Internet. This underscores that information technology is no longer just an addition but has become an essential necessity in everyday life (Ulhaq & Fajar, 2022). Several previous studies serve as references for this research. In this context, the author presents an explanation related to the research problem. Setiawan & Mugiyati (2023) examine the importance of Islamic banks adapting to the digital era. The opportunities presented by technology in Islamic banking can enhance service reach and efficiency. However, the challenge lies in how Islamic banks can innovate their products and services to remain competitive in the rapidly evolving digital era.

The development of the Islamic banking industry in Indonesia has seen significant progress and plays a strategic role in accelerating economic activities (Nastiti & Kasri, 2019). In fact, the Islamic banking sector serves as an efficient channel for allocating public funds to stimulate economic growth. Moreover, Islamic banks function as a bridge to secure the flow of funds between various entities and economic sectors, thereby optimizing the overall performance of the financial system. Therefore, to achieve financial inclusion within the framework of Islamic banking, businesses need to consider both external and internal conditions of Islamic banks (Jan et al., 2021; Modan & Hassan, 2018; Suseno & Fitriyani, 2018). One effective approach is through SWOT analysis. Utilizing SWOT analysis can serve as a strategic document to develop a clear and structured plan, helping Islamic banks achieve their goals in both the short and long term with a more organized approach.

The focus of the study on Islamic banking in the development of a Sharia-based economy in Indonesia's digital era can be centered on its role in economic growth. Islamic banks play a distinct role in facilitating the flow of funds between surplus fund holders and those in need while also influencing financial stability and interest rate dynamics. Additionally, the study can highlight how Islamic banks contribute to economic growth through their unique financial mechanisms and ethical banking principles.

METHOD

This study employs a literature review method to investigate the role of Islamic banks in the development of a Sharia-based economy. It is a qualitative descriptive study, aiming to illustrate the issues being examined. A systematic research process begins with data collection, data processing, and scientific analysis, ensuring that the results and findings are credible and accountable (Adler, 2022; Gioia, 2021; Ngulube, 2015). This study chooses this method because it is relevant to the existing issues and aligns with the research needs. This study also focuses on the role of Islamic banks in the development of a Sharia-based economy. To provide a basis for comparison, the author reviews previous studies related to "the role of Islamic banks in economic development based on Sharia principles" or other relevant sources as references.

This research adopts a qualitative approach to explore the role of Islamic banks in Sharia-based economic development. The research process begins with data collection, data processing, and scientific analysis, ensuring accountability. Thematic analysis is used to identify key patterns and themes from the comparative review of previous studies. Data validity is strengthened through data triangulation from various sources and member checking to ensure the accuracy of the findings. Islamic banks face significant opportunities and challenges in the digital era. Through an in-depth literature analysis, this study aims to understand the dynamics of digitalization within the Islamic banking sector. A literature review method is used as the primary approach, focusing on identification, theory, and relevant literature analysis.

Data and information gathered from literature sources are then critically analyzed to identify the opportunities and challenges Islamic banks encounter in adopting digital technology. Furthermore, the research findings will be evaluated using citations and previous studies to ensure accuracy, followed by analysis and interpretation to develop a deeper understanding of the implications, impacts, and necessary solutions. The conclusion of this study provides valuable insights for Islamic banks in developing effective strategies to thrive in the digital era.

RESULTS AND DISCUSSION

Role and Development of Islamic Banks

The role of Islamic banks in the development of a Sharia-based economy is highly significant. Irawan et al. (2021) highlight the critical role of Islamic banking in accelerating Indonesia's economic growth. Saragih & Irawan (2019) find that Islamic banks contribute to economic growth by boosting the investment sector through third-party funds and increasing financing through distributed funds to the public.

Islamic banks provide financing based on Sharia principles, such as: Murabahah (cost-plus sale financing), Mudarabah (partnership between capital providers and entrepreneurs), and Musharakah (joint venture between two or more parties) (Hafizd, 2020). These financing models enable Islamic banks to offer Sharia-compliant financial services to the public. Additionally, Islamic banks are responsible for providing investment funds that adhere to Sharia principles. These investments are often directed toward real-sector projects, which not only benefit the community but also contribute positively to overall economic growth.

Islamic banks also focus on community economic empowerment, encouraging public participation in the economy through justice- and sustainability-based financing. Additionally, Islamic banks emphasize social welfare, which is reflected in social assistance programs and contributions to socioeconomic development. This aligns with studies suggesting that Sharia Fintech can help micro, small, and medium enterprises (MSMEs) access funding without riba (interest) (Alika et al., 2021; Erisman et al., 2022). Furthermore, Sharia Fintech facilitates financial transactions based on Sharia principles, such as musharakah (partnership contracts) and mudarabah (profit-sharing agreements).

Financial technology (Fintech) is the integration of technology and traditional financial services methods. Fintech represents the evolving intersection of the financial services industry and technology, where startups leverage technology to offer innovative market perspectives on financial products and services traditionally provided by conventional financial institutions (Gozman et al., 2018; Zalan & Toufaily, 2017). Thus, Islamic banks are not merely financial institutions, but also key economic drivers based on Sharia principles. Their primary objective is to establish a more just, sustainable, and welfare-oriented economy that benefits society as a whole (Nafiah & Faih, 2019).

Islamic banks play a significant and multifaceted role in Indonesia’s economic growth. They provide Sharia-compliant financing to the public, particularly for entrepreneurs who require funding aligned with Islamic principles (Hasibuan et al., 2022). Additionally, Islamic banks enhance financial access for previously underserved communities, supporting financial inclusion in Indonesia (M. M. Ali et al., 2020; Saifurrahman & Kassim, 2022). They actively promote community-based economic growth, particularly for micro, small, and medium enterprises (MSMEs), through profit-sharing and Sharia-based financing principles.

Islamic banks also contribute to sustainable investment and Sharia-compliant projects, such as infrastructure development, renewable energy, and socially beneficial initiatives (Alshaleel, 2019; Ayub, 2019; Harahap et al., 2023). By continuously developing innovative financial products that cater to societal needs, they drive the expansion of Indonesia's Islamic financial sector. Furthermore, Islamic banks support overall financial system stability by adhering to more sustainable and equitable financial principles, reinforcing their role as a key pillar in Indonesia's economic framework.

The role of Islamic banks in Indonesia's economic growth continues to expand as efforts are made to broaden Sharia-based financial access and support inclusive and sustainable economic development. In line with this, Kharisma et al. (2023) highlight in their research that the emergence of Islamic banks in Indonesia has been significantly influenced by effective marketing strategies (Asnawi et al., 2019; Munandar et al., 2020; Nugraha et al., 2022), which play a crucial role in expanding market share and driving growth. These strategies help banks reach a wider target market, educate customers about the benefits of Sharia-compliant financial products, and emphasize key ethical values.

Moreover, effective marketing strategies not only boost bank revenue but also contribute to the overall financial growth of Islamic banking. When developing marketing strategies, Islamic banks must consider several essential factors, including: regulatory compliance, ethical approaches, technology adoption, and market segmentation (Aman, 2019; ElMassah & Abou-El-Sood, 2021; Riaz, 2016). Market segmentation is particularly important in identifying and targeting potential consumers who align with Islamic financial products (Muhamad & Alwi, 2015). In the digital era, digital marketing has become essential for effectively reaching customers.

Additionally, Islamic bank marketing strategies must adhere to Islamic financial principles, such as the prohibition of riba (interest). Financial technology (Fintech) innovations, including digital marketing, mobile banking applications, and other technological advancements, play a crucial role in attracting new clients and expanding the reach of Islamic banking (Charag et al., 2019; Kaabachi & Obeid, 2016; Ltifi et al., 2016). Therefore, the role of Islamic banks in developing an economy based on Sharia principles is highly vital. These banks are not only involved in financing and sustainable investments but also actively contribute to community economic empowerment in alignment with Sharia principles. Moreover, Islamic banks place a strong emphasis on social welfare, ensuring that financial activities benefit society as a whole. Thus, Islamic banks function not only as financial institutions but also as key drivers of an economy rooted in Sharia principles, fostering a fairer, more sustainable, and socially-oriented economic system (Hassan & Aliyu, 2018; Meskovic et al., 2021; Tok & Yesuf, 2022).

Opportunities and Challenges for Islamic Banks in the Digital Era

The financial services industry in Indonesia has undergone significant transformation across various industrial revolutions, including the banking sector. This continuous evolution has led to the current digital era, where the integration of technology has become essential for Islamic banks to sustain growth. The rapid advancement of digital technology presents numerous benefits and opportunities for Islamic banking, particularly in service expansion and product innovation.

Opportunities for Islamic Banks in the Digital Era

1. Community
   In today's digital era, Indonesia's predominantly Muslim population serves as a strong foundation for the growth of Islamic banking. The high level of public trust in Sharia principles further reinforces the expansion of this industry. Moreover, Generation Z, Millennials, and Generation X are known for their quick adaptation to technology. Their openness to innovation, including digital financial services, presents a golden opportunity for Islamic banks to transform and leverage technology. By implementing effective strategies, Islamic banking can position itself as the primary financial choice for Indonesians, meeting their financial needs while aligning with their ethical and religious values (Suganda, 2023).
2. Product Advertising
   Product advertising presents a golden opportunity for Islamic banks to showcase their financial products. By leveraging technology, Islamic banks can easily introduce their services and offerings to the public. This technological advantage allows global audiences to access information about Islamic banking products and services more easily, thereby expanding market potential and increasing public awareness of Sharia-compliant financial solutions (Asnawi et al., 2019; Janah et al., 2020; Utomo et al., 2020).
3. Technological Advancements
   Another key responsibility of Islamic banks is to leverage technological advancements in the financial sector. To ensure the success of technology-based financial products, a reliable and user-friendly information system is essential. Beyond easy accessibility, this information system must be capable of securely managing customer data and predicting potential risks. For instance, it should help resolve disputes if customers fail to meet their financial obligations (Thaker et al., 2019; Yazid & Kofarnaisa, 2019). The advancement of information technology plays a critical role in driving the growth of digital Islamic banking, making it one of the most prominent factors in the sector's development.
4. Essential Financial Products for Society
   In today's world, many banking products remain inaccessible to a large portion of the population. In the digital era, Islamic banks must innovate and position themselves as institutions that provide affordable and convenient financial

solutions. Currently, many banking activities are being taken over by startups through financial technology (Fintech) programs. As financial intermediaries, Islamic banks must adapt by offering digital financial products that meet customer expectations (Chong, 2021; Dinc, 2020; Mulia et al., 2020). By doing so, Islamic banks and Sharia financial institutions can expand their presence and occupy a larger space in the financial sector, ensuring their continued relevance and growth.

Challenges for Islamic Banks in the Digital Era

1. Human Resources
   Human resources (HR) play a critical role in an organization, as they are the driving force behind its operations. The effectiveness of an organization depends on the people managing its resources. Therefore, employees must be effectively managed to ensure optimal performance. Human resources are integral assets that cannot be separated from an organization or its operational units. Theoretically, all employees—whether in structural or functional positions—form the core strength of an organization. Strengthening and empowering human resources is a crucial aspect of organizational management because human capital is the key force that optimizes and mobilizes other management resources to achieve the organization's goals (M. Ali et al., 2021; Arfaizar et al., 2023; Fesharaki & Sehhat, 2018; Rana & Malik, 2017).
2. Cybersecurity
   Cybersecurity has become a major concern with the rise of Information and Communication Technology (ICT) in the Islamic banking industry. Amid increasing cybercrime incidents, awareness of cybersecurity is essential for Islamic financial institutions (Malik & Islam, 2019; Oseni & Omoola, 2015; Sartawi, 2020). It is crucial for these institutions to engage securely with the market, ensuring rapid detection of potential threats and taking appropriate countermeasures. Key aspects such as compliance, managerial commitment, budget allocation, and security policies are essential in preventing cybercrime risks.
   Following POJK No. 12/POJK.03/2018, institutions offering digital financial services must prioritize risk management and regulatory compliance with the Financial Services Authority (OJK). In the digital era, information security is not just a necessity but a fundamental requirement for Islamic banking. In 2018, Indonesia experienced a major data breach involving ATMs across 64 countries, affecting 13 banks, both private and state-owned. The estimated financial loss reached IDR 18 billion. This incident served as a serious warning for Islamic banks in Indonesia to enhance cybersecurity measures and prevent threats such as skimming, hacking, and malware attacks. To combat these challenges, continuous innovation in banking security systems is necessary to protect financial assets and mitigate digital threats (Suganda, 2023).
3. Consumer Protection

In the digital era, rapid changes and innovations in the financial sector present new challenges, particularly for banks and customers. Consumer protection in digital banking services is a top priority to ensure security, privacy, and public trust in the banking system (Esterik-Plasmeijer & Raaij, 2017; Salem et al., 2019). For Islamic banking, trust and credibility are essential factors in attracting customers to use Sharia-compliant financial services. Consumer protection extends beyond technical and operational aspects, encompassing legal dimensions that must be carefully addressed.

One key element of consumer protection is the obligation for banks to provide transparent information about potential risks associated with digital banking services. Transparency helps customers understand and prepare for possible financial risks (Chen et al., 2022; Garg et al., 2021). Additionally, data privacy is crucial. Banks must safeguard customer personal information from unauthorized access or misuse. Maintaining the confidentiality and integrity of customer data is a fundamental pillar in building trust. Thus, consumer protection in digital banking is not solely the responsibility of banks but requires collaborative efforts between regulators, financial institutions, and society to establish a secure, fair, and trustworthy banking ecosystem.

4. Lack of Financial Literacy Among the Public

   In today's digital era, there is a gap between comprehensive financial approaches and the public's financial understanding (Lascoumes & Le Gales, 2007; Lusardi & Mitchelli, 2007; Remund, 2010). This is one of the main challenges for Islamic banking. Despite advancements in financial technology, public knowledge about Islamic banking remains limited. Many people still perceive Islamic banking as being identical to conventional banking, leading to misconceptions about its principles and operations. To address this, Islamic banks must leverage technological innovations while simultaneously educating the public. Digital campaigns and awareness programs are essential to help society understand the unique characteristics of Islamic banking compared to traditional banking (Naeem, 2019, 2020; Saleh et al., 2017).

Many people still struggle to understand and access financial services. This limited financial literacy not only affects individuals personally but also creates challenges for the banking sector, particularly Islamic banking. As a result, greater efforts are needed to enhance financial literacy and ensure that all segments of society can wisely and effectively utilize financial services *(Ash-Shiddiqy, 2023)*.

The challenges in the digital development of Islamic banking must be addressed through various approaches. Islamic banks need to implement multiple strategies, including: rigorous selection of human resources to strengthen structural components within the organization; enhancing cybersecurity to ensure strict protection of consumer data; developing more effective strategies to tackle public misconceptions and lack of awareness regarding Islamic banking principles. By adopting these approaches, Islamic banks can better navigate the digital transformation while ensuring security, efficiency, and public trust.

CONCLUSION

Islamic banks are financial institutions that operate based on Islamic Sharia principles. They offer various financial services, including savings accounts, current accounts, deposits, and Sharia-based financing such as mudharabah (profit-sharing) and musharakah (partnership agreements). Islamic banks play a crucial role in economic development, emphasizing justice, sustainability, and compliance with Sharia law. Despite challenges such as limited public awareness of Islamic banking operations, their contribution to the development of a Sharia-based economy in Indonesia remains significant.

This study employs a qualitative descriptive approach to illustrate the role of Islamic banks in economic development based on Sharia principles. Thus, Islamic banks continue to serve as a key pillar of Indonesia's economy, adhering to Islamic principles and contributing to the growth of a Sharia-compliant financial system. Islamic banks, in navigating the digital era, hold immense potential for growth and innovation. By leveraging technology, they can expand their reach, enhance efficiency, and develop products that better meet customer needs.

However, this digital transformation requires careful attention to ensure compliance with Sharia principles, raise customer awareness, and strengthen cybersecurity defenses against digital threats. Through a holistic approach and well-planned adaptation strategies, Islamic banks can successfully integrate Sharia values with digital innovation, fostering sustainable growth and meeting customer expectations.

While digital advancements create opportunities, they also present challenges in digital resource management. These include: ensuring a skilled and well-trained workforce, enhancing consumer protection, and building a robust cybersecurity system to defend against hacking, skimming, and malware attacks. Addressing these challenges effectively will allow Islamic banks to thrive in the digital era while maintaining their ethical and financial integrity.

Author Contributions

Conceptualization	H.I.	Resources	H.I.
Data curation	H.I.	Software	H.I.
Formal analysis	H.I.	Supervision	H.I.
Funding acquisition	H.I.	Validation	H.I.
Investigation	H.I.	Visualization	H.I.
Methodology	H.I.	Writing – original draft	H.I.
Project administration	H.I.	Writing – review & editing	H.I.

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Informed Consent Statement

Informed consent was not required for this study.

Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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Conflicts of Interest

The authors declare no conflicts of interest.

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