Fintech in islamic finance literature: A review

Fintech dalam literatur keuangan Islam: Sebuah tinjauan

Nurcahya Hartaty Posumah
Universitas Muhammadiyah Luwuk
*nurcahyahartatyposumah@gmail.com

*Corresponding Author

ABSTRACT
This literature review examines the role of fintech in the context of Islamic finance. Through a systematic analysis of relevant literature, this research highlights the contribution of fintech in improving Islamic financial services as well as the challenges faced in the integration process. These findings indicate that although fintech has opened the door to innovation in the Islamic finance industry, there is still a need to overcome barriers related to sharia compliance and consumer protection. Therefore, this research underlines the importance of a careful and planned approach in integrating fintech with Islamic finance principles.

Keywords: Fintech, Islamic Finance, Technology Integration, Sharia Principles

ABSTRAK
Tinjauan literatur ini mengkaji peran fintech dalam konteks keuangan Islam. Melalui analisis sistematis terhadap literatur yang relevan, penelitian ini menyoroti kontribusi fintech dalam meningkatkan layanan keuangan Islam serta tantangan yang dihadapi dalam proses integrasi. Temuan ini menunjukkan bahwa meskipun fintech telah membuka pintu untuk inovasi dalam industri keuangan Islam, masih ada kebutuhan untuk mengatasi hambatan terkait dengan kepatuhan syariah dan perlindungan konsumen. Oleh karena itu, penelitian ini menggarisbawahi pentingnya pendekatan yang hati-hati dan terencana dalam mengintegrasikan fintech dengan prinsip-prinsip keuangan Islam.

Kata Kunci: Fintech, Keuangan Islam, Integrasi Teknologi, Prinsip Syariah

Introduction
Fintech in Islamic finance literature has gained interest among academics, and there is a growing body of literature on the topic. Islamic fintech has great potential due to the overlapping norms of Shariah and fintech, making it easier to implement technological disruption into Islamic finance (Aysan, 2023). However, Shari’ah compliance is one of the major challenges for the growth of Islamic fintech (Unal, 2021). In addition, Islamic fintech might pose challenges for Islamic Financial Institutions (IFIs) in terms of operational efficiency, customer retention, transparency, and accountability (Unal, 2022). The major challenge toward successful integration of Fintech in Islamic Finance is the view of several Shari’ah scholars that Fintech is not compliant with Islamic principles (Hasan, 2020). There is a need for further research to address these challenges and find solutions by opening stagnations (Alshater 2022). The literature on Islamic fintech has grown rapidly, with a stunning increase in the number of publications after 2017 (Hasan, 2020). The two main centers of Islamic fintech research are the Malaysia-Indonesia region and the GCC area (Hasan, 2020).

The integration of fintech into Islamic finance has the potential to bring several benefits. Islamic fintech has great potential mainly because of the overlapping norms of Shariah and fintech, making it easier to implement technological disruption into Islamic finance (Saba, 2019). Fintech can improve the level of financial inclusion by reaching a diverse group of
customers (Laldin, 2019). It can also increase the attractiveness and Shari’ah compliance of products offered by the Islamic finance industry (Anca, 2019). The trust shift to Islamic finance could be merged with the opportunities of fintech and increase the potential of Islamic fintech even more (Rabbani, 2022). Furthermore, the increasing number of Islamic fintech publications shows the potential of the field for the industry’s future (Rabbani, 2020). However, there are also challenges to integrating fintech into Islamic finance, such as Shari’ah compliance, operational efficiency, customer retention, transparency, and accountability (Firmansyah, 2019). Further research is needed to address these challenges and find solutions.

The integration of fintech into Islamic finance has the potential to bring several benefits, but there are also potential risks associated with it. One of the major challenges for the growth of Islamic fintech is Shari’ah compliance, which is unique to Islamic finance and requires careful consideration (Firmansyah, 2019) (Rabbani, 2022). In addition, Islamic fintech might pose challenges for Islamic Financial Institutions (IFIs) in terms of operational efficiency, customer retention, transparency, and accountability (Firmansyah, 2019) (Rabbani, 2022). Fintech-based solutions are also affected by security and privacy issues. Furthermore, the underdevelopment of the ecosystem of several fintech infrastructures is limiting a comprehensive understanding of its capabilities and also affecting its market progression. The view of several Shari’ah scholars that fintech is not compliant with Islamic principles is another major challenge toward successful integration of fintech in Islamic finance (Rabbani, 2022). Further research is needed to address these challenges and find solutions.

The main challenges faced by Islamic Fintech include Shari’ah compliance, operational efficiency, customer retention, transparency, accountability, underdevelopment of ecosystems, security issues, and user and software-related challenges (Firmansyah, 2019) (Hui, 2019). Shari’ah compliance is a major challenge for the growth of Islamic Fintech, and Islamic Fintech might pose challenges for Islamic Financial Institutions (IFIs) in terms of operational efficiency, customer retention, transparency, and accountability. Limited infrastructure support and security vulnerabilities affect both the adoption and implementation of Fintech solutions in Islamic Finance. The literature also suggests that the abstract nature of Fintech-based technologies and the view of several Shari’ah scholars that Fintech is not compatible with Islamic finance pose significant challenges (Anca, 2019). Further research is needed to address these challenges and find solutions to improve the integration of Fintech and Islamic finance.

In recent years, Indonesia has become one of the markets that has attracted attention in the development of fintech, especially in the Islamic finance sector. This phenomenon not only reflects the country’s rapid economic growth but also shows great potential in combining technology with Islamic financial principles to meet the increasing needs of the Muslim community.

Development of Islamic Finance Fintech in Indonesia (Firmansyah, 2019): (1) Growth of the Fintech Ecosystem: Indonesia has witnessed rapid growth in the fintech ecosystem, including in the Islamic finance sector. Various fintech companies focused on sharia-compliant financial services are starting to emerge, offering a variety of products and services that include microfinancing, insurance, investment and digital payments. (2) Financial Inclusion: Islamic financial fintech has played an important role in increasing financial inclusion in Indonesia, especially among communities previously underserved by conventional financial institutions. Through fintech platforms, people can access financial services that comply with sharia principles more easily and cheaply. (3) Micro and MSME Financing: One of the main contributions of Islamic financial fintech in Indonesia is in supporting micro and small and medium enterprises (MSMEs) financing. Through crowdfunding and peer-to-peer lending platforms, small businesses can gain access to capital more easily, strengthen the economic base and improve the economic welfare of society. (4) Regulation and Supervision: Although the growth of Islamic finance fintech has yielded many benefits, challenges related to regulation and supervision remain a concern. The Indonesian government must continue to
update regulations and supervisory frameworks to ensure the sustainability and stability of the Islamic finance fintech ecosystem, as well as protect consumers from the risks associated with the use of this technology. (5) Partnership and Collaboration: The importance of partnerships between the conventional financial industry and Islamic financial fintech is also increasingly visible in Indonesia. Through good collaboration, both sectors can benefit from each other by harnessing the power of technology and Islamic financial knowledge to provide better services to society. Fintech has introduced a new paradigm in the global financial industry by providing technological innovations that enable financial services to become more efficient and accessible. In the context of Islamic finance, this phenomenon invites considerable attention, considering the special nature and sharia principles that underlie financial activities in this ecosystem.

Research on the influence of fintech in Islamic financial practices is important in facing rapid technological transformation. In this case, a systematic literature review is the right approach to understand the developments, challenges and opportunities faced by the Islamic finance industry in adopting fintech technology.

The existence of fintech in the context of Islamic finance brings a number of challenges and questions that need to be answered. First, although fintech technology offers efficiency and convenience in financial services, what are the implications of its use for compliance with sharia principles in Islamic financial transactions? Second, how does fintech affect financial inclusion among Muslims, especially those living in areas with limited access to conventional financial services?

Although there has been a number of studies on fintech and Islamic finance, most of them are descriptive or focus on specific aspects of this phenomenon. A systematic literature review will provide a more holistic understanding of how fintech has been studied in the context of Islamic finance, as well as identify research gaps that need to be filled to direct future research in this area.

Thus, this research aims to fill this knowledge gap by conducting a systematic review of existing literature, to explore and analyze the contributions that have been made, as well as to identify future research directions in integrating fintech with Islamic finance principles.

Research Methods

The research method used in this study is a systematic literature review, which aims to identify, evaluate and synthesize all relevant and current literature on fintech in the context of Islamic finance. This was done to ensure that the research was based on a comprehensive understanding of the topics discussed.

The process begins by conducting a search in relevant academic databases, such as Google Scholar, IEEE Xplore, Scopus, ScienceDirect, using appropriate keywords, such as "fintech", "Islamic finance", "Islamic banking", and "financial technology". Selecting an appropriate database helps ensure that all relevant literature is accessible.

After conducting an initial search, the resulting articles were filtered based on relevance to this research topic. First, the keywords were used in a search on Google Scholar, resulting in several articles. Then, the articles were carefully analyzed, and articles that were not directly relevant to the topic or did not meet the inclusion criteria were excluded. This process helps narrow the research focus and eliminates irrelevant articles.

After the screening process, approximately suitable articles were selected for further evaluation. Each selected article is analyzed in depth to extract relevant information about fintech's contribution to Islamic finance, challenges faced, and opportunities available. This information is then synthesized and analyzed to gain a comprehensive understanding of the topic.

From this process, it was concluded that there is a number of relevant studies on fintech in the Islamic finance literature, but there are still research gaps that need to be filled. It
is hoped that this literature review will provide deeper insight into the role of fintech in the Islamic finance industry, as well as highlight future research directions in the integration of financial technology with sharia principles. These conclusions are based on a thorough analysis of the literature presented, and provide directions for future research in this area.

Results and Discussion
The level of adoption of fintech technology in the Islamic finance industry

1. Total fintech platforms

The number of fintech platforms refers to the number of fintech technology platforms or applications that are actively operating in the context of the Islamic finance industry. The alternative hypothesis (H1) proposed states that there is a positive relationship between the number of fintech platforms and the level of adoption of fintech technology in the Islamic finance industry. This means that the more fintech platforms available, the higher the level of adoption of fintech technology by Islamic financial institutions (Hui, 2019).

Proposing this hypothesis is based on the assumption that the existence of many fintech platforms shows the development of a dynamic fintech ecosystem in the Islamic finance industry. With the existence of a variety of fintech platforms, Islamic financial institutions will have more choices and opportunities to adopt fintech technology that suits their needs and business goals. In addition, increasing the number of fintech platforms can also encourage healthy competition in the market, encourage further innovation, and accelerate the process of adopting fintech technology by the Islamic finance industry as a whole. Therefore, this hypothesis aims to test the relationship between the number of fintech platforms and the level of fintech technology adoption, which in turn can provide valuable insight into the dynamics of the Islamic finance industry in facing the era of digitalization (Ali, 2019).

H1: There is a positive relationship between the number of fintech platforms and the level of adoption of fintech technology in the Islamic finance industry.

2. Penetration of fintech technology

This hypothesis states that there is a positive relationship between fintech technology penetration and the level of fintech technology adoption in the Islamic finance industry. Fintech technology penetration refers to how widely and deeply fintech technology has been implemented and used by Islamic financial institutions. This hypothesis assumes that the higher the level of fintech technology penetration, the higher the level of fintech technology adoption by Islamic financial institutions (Alam, 2021).

Proposing this hypothesis is based on the belief that the level of penetration of fintech technology is an important indicator of the readiness and commitment of Islamic financial institutions in adopting this technology. The more widely used fintech technology is used, the more likely it is that Islamic financial institutions have taken strategic steps to integrate fintech in their operations and services. Thus, this hypothesis asks the question whether the level of adoption of fintech technology can be influenced by the extent to which the technology has been implemented and accepted in the Islamic finance industry (Muneeza, 2021).

Through testing this hypothesis, the research can provide valuable insights into the relationship between fintech technology penetration and the level of fintech technology adoption in the Islamic finance industry. The results can be used to assist strategic decision making within Islamic financial institutions, as well as to formulate policy steps that support the development and adoption of fintech technology in the future (Yasini, 2019).

H2: There is a positive relationship between fintech technology penetration and the level of fintech technology adoption in the Islamic finance industry.
3. Fintech integration

This hypothesis states that there is a positive relationship between fintech integration and the level of adoption of fintech technology in the Islamic finance industry. Fintech integration refers to the extent to which fintech technology has been implemented and integrated with existing financial processes and services within Islamic financial institutions. This hypothesis assumes that the higher the level of fintech integration, the higher the level of adoption of fintech technology by Islamic financial institutions (Ali, 2021).

Proposing this hypothesis is based on the belief that fintech integration is a key factor in the successful adoption of fintech technology in the Islamic finance industry. Effective integration can enable Islamic financial institutions to harness the full potential of fintech technology in improving operational efficiency, increasing service accessibility, and expanding market reach. Therefore, this hypothesis asks the question whether the level of adoption of fintech technology can be influenced by the extent to which fintech has been integrated with the infrastructure and operations of Islamic financial institutions (Ahmad, 2020).

Through testing this hypothesis, the research can provide valuable insights into the importance of fintech integration in increasing the adoption of fintech technology in the Islamic finance industry. The results can be used to identify areas where further integration is needed, as well as to formulate strategies that can help accelerate the adoption of fintech technology across the Islamic finance sector (Ali, 2019).

H3: There is a positive relationship between fintech integration and the level of fintech technology adoption in the Islamic finance industry.

The quality of Islamic financial services provided by fintech.

1. Shariah compliance

This hypothesis states that there is a positive relationship between the level of sharia compliance and the quality of Islamic financial services provided by fintech. Shariah compliance refers to the extent to which Islamic financial services provided by fintech comply with sharia principles, including provisions regarding interest, usury, and prohibitions on transactions that are not in accordance with sharia. This hypothesis assumes that the higher the level of sharia compliance, the better the quality of Islamic financial services provided by fintech (Alam, 2019).

Proposing this hypothesis is based on the principle that sharia compliance is the main pillar of quality Islamic financial services. Financial services that are fully compliant with sharia principles are expected to provide greater benefits to users, as well as build higher consumer trust and satisfaction. Therefore, this hypothesis asks the question whether the quality of Islamic financial services provided by fintech can be influenced by the level of sharia compliance (Jamil, 2019).

Through testing this hypothesis, research can provide a better understanding of the relationship between sharia compliance and the quality of Islamic financial services provided by fintech. The results can help Islamic financial institutions and fintech developers to prioritize sharia compliance in the development and provision of better and higher quality Islamic financial services (Omoola, 2019).

H4: There is a positive relationship between the level of sharia compliance and the quality of Islamic financial services provided by fintech.

2. Service Availability

This hypothesis states that there is a positive relationship between service availability and the quality of Islamic financial services provided by fintech. Service availability refers to the extent to which Islamic financial services provided by fintech are easily accessible and available to users, both geographically and through various distribution channels. This hypothesis
assumes that the higher the level of service availability, the better the quality of Islamic financial services provided by fintech (Rahim, 2019).

Proposing this hypothesis is based on the understanding that the availability of good services is very important to ensure broader and inclusive access to Islamic financial services. Easily accessible services can help increase community participation in the use of Islamic financial services, increase the ease and comfort of using services, and strengthen overall user satisfaction. Therefore, this hypothesis asks the question whether the quality of Islamic financial services provided by fintech can be influenced by the level of service availability (Ahmad, 2020).

Through testing this hypothesis, research can provide valuable insight into the importance of service availability in improving the quality of Islamic financial services provided by fintech. The results can help fintech developers and Islamic financial institutions to design more effective strategies in increasing service availability and strengthening the overall quality of Islamic financial services (Muneeza, 2021).

**H5: There is a positive relationship between service availability and the quality of Islamic financial services provided by fintech.**

3. **Service Reliability**

This hypothesis proposes that there is a positive relationship between service reliability and the quality of Islamic financial services provided by fintech. Service reliability refers to the ability of Islamic financial services provided by fintech to operate consistently and reliably, including in terms of transaction handling, data security and platform availability. This hypothesis assumes that the higher the level of service reliability, the better the quality of Islamic financial services provided by fintech (Hui, 2019).

The proposal of this hypothesis is based on the belief that service reliability is an important attribute of quality financial services. Reliable service will increase user trust, strengthen customer loyalty, and increase overall satisfaction. Therefore, this hypothesis asks the question whether the quality of Islamic financial services provided by fintech can be influenced by the level of service reliability (Anca, 2019).

Through testing this hypothesis, research can provide valuable insight into the importance of service reliability in improving the quality of Islamic financial services provided by fintech. The results can help Islamic financial institutions and fintech developers to improve technological infrastructure, operational processes and quality control to ensure high and consistent service reliability for users (Unal, 2022).

**H6: There is a positive relationship between service reliability and the quality of Islamic financial services provided by fintech.**

4. **User Satisfaction**

This hypothesis states that there is a positive relationship between the level of user satisfaction and the quality of Islamic financial services provided by fintech. User satisfaction refers to the level of user satisfaction, trust and loyalty towards Islamic financial services provided by fintech, which can be measured through user feedback, reviews or ratings. This hypothesis assumes that the higher the level of user satisfaction, the better the quality of Islamic financial services provided by fintech (Alshater 2022).

Proposing this hypothesis is based on the understanding that user satisfaction is an important indicator of the quality of Islamic financial services. Satisfied users are more likely to reuse services, provide recommendations to others, and maintain long-term engagement with a platform or financial institution. Therefore, this hypothesis asks the question whether the quality of Islamic financial services provided by fintech can be influenced by the level of user satisfaction (Rabbani, 2022).
Through testing this hypothesis, research can provide valuable insight into the importance of prioritizing user satisfaction in an effort to improve the quality of Islamic financial services provided by fintech. The results can help fintech developers and Islamic financial institutions to better understand user preferences and expectations, as well as to design more effective strategies to meet user needs and increase their satisfaction (Firmansyah, 2019).

**H7:** There is a positive relationship between the level of user satisfaction and the quality of Islamic financial services provided by fintech.

### Framework

![Figure 1. Framework](image)

### Conclusion

In the context of a literature review on the use of fintech in Islamic finance, it can be concluded that the integration of fintech technology has made a significant contribution to the development of the Islamic finance industry. Through a systematic literature review, we see that the adoption of fintech in the Islamic finance industry has created new opportunities in financial services that comply with sharia principles, such as payment, financing, investment and insurance services. However, the challenges faced cannot be ignored, especially those related to sharia compliance, monitoring and data security. Therefore, careful and sustainable steps are needed to ensure that the integration of fintech with Islamic finance runs harmoniously and in accordance with sharia values.

### References


