

**OPPORTUNITIES AND CHALLENGES FOR ISLAMIC
FINANCIAL TECHNOLOGY DEVELOPMENT IN INDONESIA:
LITERATURE STUDY**

***PELUANG DAN TANTANGAN PENGEMBANGAN TEKNOLOGI
FINANSIAL SYARIAH DI INDONESIA: STUDI LITERATUR***

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Abstract

The development of digital technology has entered the financial sector which encourages the birth and development of financial technology. The low level of financial literacy coupled with difficulties in accessing financing to the banking sector tends to encourage people to seek alternative financing outside of banking. One of the most developed financial services is financial technology. However, the experience of people using financial technology products shows that there are fundamental problems, especially when people use illegal financial technology products. Therefore, Islamic financial technology is an alternative because Islamic fintech applies the noble values of Islamic teachings. This article was written to review the literature that has been published in scientific journals in the last 4 years that discusses the opportunities and challenges of Islamic financial technology. The results of this study indicate that there are several opportunities and challenges faced by Islamic financial technology companies.

Keywords: *opportunities; challenges; financial technology, Islamic*

Abstrak

Perkembangan teknologi digital telah memasuki sektor keuangan yang mendorong lahir dan berkembangnya teknologi finansial keuangan. Tingkat literasi keuangan yang rendah di tambah dengan kesulitan mengakses pembiayaan ke sektor perbankan cenderung mendorong

masyarakat mencari alternatif pembiayaan di luar perbankan. Salah satu jasa keuangan yang sangat berkembang adalah teknologi finansial. Namun, pengalaman masyarakat menggunakan produk teknologi finansial menunjukkan adanya persoalan mendasar terutama ketika masyarakat menggunakan produk teknologi finansial illegal. Oleh karenanya teknologi finansial syariah menjadi salah satu alternatif karena fintek Islami menerapkan nilai-nilai luhur ajaran Islam. artikel ini ditulis untuk menelaah literatur yang telah diterbitkan dalam jurnal-hurnal ilmiah 4 tahun terakhir yang membahas peluang dan tantangan teknologi finansial syariah. Hasil penelitian ini menunjukkan bahwa terdapat sejumlah peluang dan tantangan yang dihadapi oleh perusahaan teknologi finansial syariah.

Kata kunci: peluang; tantangan; teknologi finansial; syariah.

A. INTRODUCTION

The development of the Islamic finance industry has achieved a new phase after the development trend outside the banking sector. The Islamic finance industry has also expanded into non-banking sectors such as the capital market, insurance, and Islamic financing. In the financing sector, the rapid growth of financial technology in Indonesia provides an opportunity for the growth of a financial technology industry based on Islamic teachings.

Indonesia is a country with a very large population. Indonesia has experienced economic growth in the last two decades. The growth of the financial industry in Indonesia is also driven by the development of financial technology which is greatly assisted by support from banks and governments (Prawirasasra, 2018). The introduction of the public to digital banking has made it easier for people to access financing to the formal financial institution sector. However, there are several obstacles encourage people to look for other alternatives to access financing outside of banking. According to 2019 data, the level of financial inclusion in Indonesia has reached 76%. However, there is a problem with the level of equity in financial inclusion because the majority of people who use financial products are in cities as much as 84%. The number of people in rural areas is still at 69%. This condition shows that there is a gap in the level of financial inclusion of urban communities and rural communities.

One of the financial institutions that are increasingly popular in recent times is financial technology. The presence of financial technology is expected to be a catalyst for national financial inclusion which is targeted to reach 90% by 2024. Financial technology is increasingly gaining a place as people's choice due to three main reasons,

namely easy access by the community, products that can fulfill people's needs, and products offered at affordable costs. Based on data from the Financial Services Authority (OJK) there are more than 180 registered financial technology companies. However, only 63 financial technology companies have officially obtained permission from the OJK. In 2018 there was a trend in the development of Islamic-based financial technology. The data shows that currently 4 Islamic financial technology companies were inaugurated by the OJK.

The presence of Islamic financial technology, of course, just wants to enliven the number of financial technology companies in Indonesia. Islamic financial technology is expected to be a solution to legal problems and the traumatic experience of people who have difficulties when using technology financial services, especially illegal financial technology companies. According to the records of the Financial Services Authority (OJK), there were 1,026 illegal financial technologies in 2020. In March 2021, the total number of complaints to the OJK reached 5,421 complaints. Some problems from complaints related to illegal online loans can be mapped, including objections to the provision of facilities (1,696 services), objections to additional fees/fines (1,725 services), objections to invoices (2,487 services), as well as problems with the legality of financial service institutions and their products (2,821 services).

Islamic financial technology puts forward Islamic values that adhere to Islamic financial provisions. Islamic financial technology is expected to be able to provide services that provide security and comfort to the community. Islamic financial technology offers financing products that do not contain interest (ribawi transactions), do not finance loans for illicit objects, and avoid manipulation, and prioritize Islamic ethics in dealing with customers.

Based on the background above, the author is interested in discussing the opportunities and challenges of Islamic technology finance in Indonesia in research that has been going on for the last 4 years (2018 to 2021). To the best of the author's knowledge, no one has ever conducted a literature study on the opportunities and challenges of Islamic financial technology in Indonesia. This literature study is important because it is useful to provide data on what are the opportunities that support the development of Islamic technology finance in Indonesia. This literature study is also

useful in providing data on what challenges are faced by Islamic technology finance in Indonesia. This literature study on the opportunities and challenges of Islamic technology finance in Indonesia can contribute to understanding the strategies that can be taken in developing Islamic technology finance in the future.

B. LITERATURE REVIEW

Studies on the use of both conventional and Islamic-based financial technology in Indonesia have been reviewed in several works of literature. Aam Slamet Rusydiana (2018) researched how to develop the Islamic financial technology industry in Indonesia. Setyaningsih (2018) conducted a SWOT Analysis of the Implementation of Islamic Financial Technology at PT Telkom Indonesia. Rahadiyan and Sari (2019) have investigated the opportunities and challenges of implementing peer-to-peer lending financial technology to improve the welfare of the Indonesian people. The opportunities and challenges of financial technology for the Islamic economy have been described by Rokhmat Subagiyo (2019). Hiyanti, Lucky Nugroho, Sukmadilaga, Fitrijanti (2019) have also researched the Opportunities and Challenges of Islamic Financial Technology in Indonesia. Wasyith, W. (2019) has conducted a literature study on Technology Adoption in Islamic Financial Economics Research. Research by Nurul Kholifah and Very Andrianingsih (2020) has examined the Opportunities and Challenges of Implementing Financial Technology (Financial Technology) in Islamic Banking. Narastri, (2020) researched Financial Technology in Indonesia from an Islamic Perspective.

Furthermore, Abadi, Lailiyah, and Kartikasari (2021) conducted a SWOT analysis of Islamic financial technology in creating financial inclusion in Indonesia (Case Study 3 Islamic Banks in Lamongan). Likewise, Yudhira (2021) has analyzed the Development of Islamic Financial Technology during the Covid-19 Pandemic in Indonesia. Therefore, further research to map out what are the opportunities and challenges of using Islamic-based financial technology in Indonesia is certainly something interesting considering that there has been no similar research.

Financial Technology Concept

Financial Technology is a combination of the terms financial services and Information technology. Conceptually, it is understood that Financial Technology is a technological innovation in the financial sector by providing various services provided by startup companies online. The financial services provided by Financial Technology are very diverse, ranging from payment traffic, insurance, financing to corporate risk assessment. It is well recognized that financial technology is a new concept that has emerged in the modern era to facilitate consumers and producers in financial transactions without having to meet face-to-face at any time (Sangwan, Prakash, and Singh, 2020).

It can be said that financial technology is a new invention that combines financial services with technological advances to provide convenience for both consumers and producers in the financial industry sector. Broadly speaking, Financial Technology is defined as a company that generates revenue through the provision of technology-based financial services.

Financial technology is an innovation in financial services using technology so that people can easily access financial products and services that cannot be accommodated by traditional financial services. In principle, the emergence of financial technology in the community is due to the inability of the traditional financial industry to provide equitable services to the entire community. It must be acknowledged that the financial industry is highly regulated. As a result of the strict regulations on the use of financial products and services in the financial sector, people are encouraged to seek alternative funding that promises convenience in addition to traditional financial industry services.

Financial technology was popular after the global crisis in 2008. The impact of the global crisis worsened the condition of people with low income, unstable income, living in remote areas, marginalized communities, people with physical limitations due to disability, and generally unbankable workers. These groups then looked for opportunities to obtain alternative funding outside the financial industry sector that existed at that time. This opportunity is then exploited by financial technology players until the existence of financial technology companies is growing.

Theoretically, there are 5 (five) major roles of Start-up Financial Technology, namely, First, financial transactions become more practical and secure. Second, Financial Technology can advance the development of digital currencies. Third, Financial Technology has the potential to improve people's lives because it reaches the unbanked community. Fourth, Financial Technology can build banking infrastructure with a new symbiotic approach between technology and banking services as a solution to increase public access to the financial sector. Fifth, Financial Technology can be used as a tool to combat loan sharks (Irawan, 2021).

In the context of today's modern life, Financial Technology has become an institution that is relevant to the financial needs of society. Access to financing and other financial services are provided more easily by Financial Technology. The services offered by Financial Technology are fairly complete, covering a variety of financial transactions such as payments, financing, or borrowing money, as well as financial transaction services that can be accessed through easy, cheap, and fast technology media

Islamic Technology Financial Concept

The presence of Islamic financial technology is driven by the reality of conventional financial technology conditions which are viewed negatively by the public. Several media reported public complaints regarding disturbing online lending practices. Complaints about illegal online lending practices are rife in various mass media as well as social media. There are reports of physical and verbal violence to online loan customers. There are reports regarding the circulation of personal identity data of online loan customers to the public, including the dissemination of identity data of customers who fail to pay to the public. Of course, this experience for online loan customers provides a negative stigma that causes people to have a bad impression of technology-based financial services. According to OJK data from 2018 to 2019, there were complaints as many as 1,230 illegal online loan service providers because they did not have permission from the OJK.

The bad image of financial technology is certainly the entrance for the presence of Islamic Financial Technology. In principle, Islamic Financial Technology is a technology-based financial institution that applies Islamic principles that uphold morality towards humans. It is hoped that the presence of Islamic Financial Technology will be able to provide more humane services. Islamic values implemented in Financial

Technology are believed to be more in line with values that uphold human dignity (Narastri, 2020).

Islamic financial technology can be understood as a form of technology-based financial service innovation and based on Islamic law. Islamic financial technology is expected to be present to provide benefits to the wider community universally, not only Muslims but also non-Muslims. Islamic financial technology makes it easier for the public to access financial products and services that compete with conventional financial technology but with the peculiarity of having an operational service base that has been adapted to Islamic principles and values (Perwira, 2018).

In the perspective of *fiqh muamalah*, in principle Financial Technology does not conflict with the Islamic economic system as long as it follows the principles of the validity of a contract, and fulfills the requirements and pillars and laws that apply in Islamic Islam. There are three main Islamic criteria from Financial Technology in the perspective of *muamalah fiqh*. First, only finance projects or goods and services that are *halal* and legal. Both operate based on contracts that meet the legal pillars and conditions in Islam. Third, uphold Islamic etiquette and morality in dealing with customers.

The financial benefits of technology that allow the widespread financial inclusion of people who previously could not access financial services at traditional financial institutions is considered following the concept of benefit in *fiqh*. The existence of Islamic Financial Technology is expected to be able to create benefits in expanding access to financial services to vulnerable groups of people who find it difficult to obtain financial service facilities. Islamic financial technology is believed to be able to provide convenience for the fulfillment of people's needs in obtaining funds in a short time and easy process. People have various needs, some are consumptive, some are productive. The presence of Islamic financial technology is expected to be able to provide an alternative for the community in meeting their financial needs following the appropriate segmentation according to the character of financial technology customers. In addition, the implementation of the principle of working together in crowdfunding-based financial technology is also seen as still following Islamic teachings. Especially if the pool of funds implemented in financial technology is used for commercial or social projects that are under Islamic principles.

C. RESEARCH METHODS

This research is a literature study of articles relevant to the research title using google scholar access assisted by Publish or Perish software. The research stages were carried out by following the Miles and Huberman data triangulation method including data reduction, data presentation, and conclusion drawing and verification. The relevant articles are then reduced according to the emerging themes according to the needs of the research problem, then the data is grouped for the data presentation stage, then conclusions are drawn and verification is carried out by comparing the content of the articles that parts of research studies.

D. FINDINGS AND DISCUSSIONS

Based on search results using the Publish or Perish application with the keywords Islamic technology financial opportunities and challenges published in the last 4 years, from 2018 to 2018 s.d. 2021 found 54 journal articles. According to data from the Publish or Perish application, the number of citations on the paper totals 161 citations which are divided into 53.67 citations per year in the last 4 years. The average number of authors is 1.85.

Based on the results of a search on the literature collected, the researchers found supporting data related to the opportunities possessed in the development of financial technology in Indonesia. Several opportunities are presented in the literature. Data shows that with a large population of 207 million people, Indonesia is one of the prima donnas for developing financial technology. A large number of people with the level of financial inclusion that is still wide open is a very promising opportunity for the growth and development of financial technology.

The emergence of financial technology in the community in some literatures is mentioned because of the inability of the traditional financial industry to provide services to all levels of society. Traditional financial institutions are bound by strict rules so that they apply the precautionary principle and require layered administration to prospective customers who apply for funding. Faced with these obstacles to access to traditional financial institutions, people are then encouraged to seek alternative funding other than traditional financial industry services. The term financial inclusion has become increasingly popular after the global crisis in 2008. There is a demand for

people to increase their financial inclusion because the impact of the 2008 crisis has affected the lowest social groups. this group is characterized by low income. non-fixed income, living in remote areas, people with disabilities, workers who do not have legal identity documents, and marginalized communities. This community group is generally unbanked and the number is not small.

Based on OJK data in 2019, the financial literacy index in Indonesia reached 38.03% and the financial inclusion index was 76.19%. Most of the public financial inclusion in the OJK survey is mostly in the banking sector, namely 73.88%, inclusion in financial institutions is still 14.56%, inclusion in pawnshops is 12.38%, and inclusion in microfinance institutions is still very small at only 0, 72%. This condition certainly strengthens the opportunity for the development of financial technology as alternative financing for people who have not been able to access banking and other financial institutions that are proven to still have a low level of inclusion. Moreover, the financial services regulator in Indonesia is targeting 90% financial inclusion by 2024.

The global push to increase financial inclusion is even more prominent in the era of financial technology, which is getting stronger and growing rapidly. Financial technology is developing in various financial sectors and financial institutions, starting from payment startups, lending, financial planning (personal finance), retail investment, crowdfunding, remittances, financial research, and others. Not only limited to helping finance business capital, but the role of financial technology has also penetrated various aspects such as digital payment services and financial arrangements.

Several studies have shown that the implementation of financial technology has a good level of effectiveness in increasing public financial inclusion. Financial technology has attracted people's attention because this service provides many service features that facilitate financial needs and can be used side by side with cooperative financial institutions, banking, and insurance. The emergence of financial inclusion programs in the era of financial technology is inseparable from innovation and public awareness of the importance of access to banking or financial institutions in supporting the empowerment of the unbanked community and improving the quality of Islamic financial institutions. Most of the adults who are in their productive age still do not have access to finance. Therefore, financial inclusion agendas and programs are becoming increasingly important.

The data also shows that the majority of Indonesia's population is inhabited by 87.2% Muslims and occupies about 13% of the world's Muslim population. Along with the development of global and national Islamic economics and finance, the current offering of various financial products and services is not only dominated by the conventional system but there are also financial institutions that offer an Islamic Islamic system. Of course, the factor of the large Muslim population in Indonesia is one of the opportunities that support the development of Islamic financial technology. The presence of Islamic financial technology can be an alternative for Indonesian Muslims to use financial technology products that are following their preferences as people who are obliged to carry out Islamic Islam, including in economic and financial activities.

When viewed in the data of the Indonesian Financial Technology Association (AFTECH), which was established in 2016, the number of financial technology members as many as 335 financial technology members. Based on OJK data as of September 8, 2021, the total number of providers of peer-to-peer lending financial technology or lending financial technology registered and licensed at OJK is 106 providers. Meanwhile, according to Bank Indonesia data, there are around 45 payment financial technologies. From the OJK financial technology data, it was found that there were 9 Islamic lending financial technologies licensed and registered with the OJK, namely Investree, Ammana.id, ALAMI, DANA ISLAMIC, DUHA ISLAMI, qazwa.id, ETHIS, KAPITALBOOST, PAPITUPI Islami.

The opportunity for the growth of Islamic financial technology is increasingly driven by the positive impression of Islamic financial technology which is not only present to provide the community with breakthrough innovations, easy access, convenience, and low costs but is also committed to the values and principles of Islamic finance. This high expectation of Islamic financial technology is one of the opportunities that strengthen the existence of Islamic financial technology.

The driving force for the growth of Islamic financial technology is that operationally Islamic financial technology makes it easier for users of traditional financial institutions such as Islamic banks, Islamic insurance, and other Islamic financial institutions to interact with these financial institutions. The use of financial technology in Islamic financial institutions helps to expand public access to meet increasingly diverse financial needs.

The Islamic finance industry in many studies has also been found to be more stable and stronger to survive than the conventional system of the finance industry. Financial system stability has been proven and recognized by financial authorities not only in Indonesia but also globally. Financing that always avoids speculative transactions, interest-bearing transactions, prioritizes trade and cooperation transactions, emphasizes the existence of the real sector as a key principle that keeps Islamic financial technology more stable and under actual economic conditions.

Islamic financial technology opportunities are also still widely open because Islamic financial technology is able to provide solutions for any needs that cannot be served by conventional/traditional financial services. Islamic financial institutions run operations in accordance with the principles and contracts that have been regulated in Islam. Islamic financial technology products can be varied and complex according to the demands and needs of the community such as buying and selling-based financing, business cooperation-based financing, lease-based financing, service-based financing, and other financial services according to market needs.

The supporting factor is believed to further strengthen Islamic financial technology in Indonesia is the very large MSME market in Indonesia. Data shows that the number of MSMEs in Indonesia is increasing from year to year. Currently, there are more than 65 million MSMEs spread across Indonesia. In 2016, there were 61.7 million MSMEs in Indonesia. The number continues to increase, in 2017, the number of MSMEs reached 62.9 million and in 2018, the number of MSMEs reached 64.2 million. It is predicted that in 2019, 2020 to 2021 the number will continue to increase. The composition of business actors in Indonesia is also dominated by MSMEs because according to data, it is around 99 percent of the total business actors. The presence of Islamic financial technology will make it easier for MSME actors to access financing. The data shows that the biggest obstacle faced by MSME actors in Indonesia is limited access to capital. Islamic financial technology can provide capital to MSME actors in Indonesia without the need to meet face to face. Ease of access to capital through financial technology that complies with Islamic principles will further strengthen the opportunities for developing Islamic financial technology in Indonesia.

Thus, the advantages of Islamic financial technology according to some views compared to conventional financial technology are, among others, because Islamic

financial technology is seen as more capable of realizing the transparency of financial activities; Islamic financial technology is seen as more capable of creating opportunities for a wider range of customers, both households and businesses, to access Islamic financial services; Islamic financial technology is seen as more capable of providing investments that are more Islamic; Islamic financial technology also has the potential to reduce risks for consumers because it follows strict rules to enforce justice for all parties. Many factors can be a factor in strengthening Islamic financial technology, among others, by adopting best practices that are generally applied to financial technology in general and reinforced by consistently maintaining the operational suitability of Islamic financial technology to always comply with Islamic compliance. consistency in maintaining adherence to Islamic principles will strengthen the level of customer trust to interact and loyally use Islamic financial technology products in the long term.

As for the challenges of Islamic financial technology, according to AFTECH, the survey results in the 2019 Annual Member Survey found four challenges faced by financial technology in Indonesia, namely infrastructure, environmental and regulatory issues, skill gaps, and good governance. In Infrastructure, the survey results show that e-KYC, open banking API, and cloud infrastructure are very important for the financial technology industry. Therefore, the creation of a conducive regulatory environment in implementing clear governance for the utilization of the above infrastructure and the harmonization of various related regulations is very necessary. In the Regulatory Environment, the survey shows that implementation clarity and a faster-licensing process are needed to process e-KYC, data governance, and regulations related to taxation. In the Expertise Gap, The survey shows that there are still skill gaps, for example in the areas of Data and Analytics, Programming, and Risk Management. Collaboration between the government, the fintech industry, and academia is needed to address these challenges in the short to medium term. As for Governance, it was found that the growth of the fintech industry (both before and during the pandemic) and its increasing contribution to the national economy were followed by an increase in cybersecurity, market, and operational risks. In parallel, these trends emphasize the importance of consumer protection. The survey results show that AFTECH members uphold these principles through the implementation of the Code-of-Conduct, the

adoption of international standards (including cybersecurity, data privacy, and data security) as well as the provision of customer service and/or complaint handling processes respectively.

The core problems faced in the development of the Islamic financial technology industry are the lack of policy instruments that oversee the financial technology work process and the availability of financial technology human resources. The core strategies or foundations needed for the development of Islamic financial technology are the Ability to manage and analyze data in the era of big data, and human resources in digital marketing. For aspects of the ecosystem of actors involved in the development of Islamic financial technology in Indonesia, the important actors are the government or regulators, educational institutions, especially universities, as well as the existing financial industry, both banks and other financial institutions (Aam Slamet Rusydiana, 2018).

The challenges faced by financial technology are regulatory issues, human resources, and mastery of technology from people who are less familiar with financial technology screen displays. There are also challenges in legal protection, data security, competition between the peer-to-peer lending industry and banks, and the low level of public literacy in peer-to-peer lending. The problem is that there are still few Islamic financial technologies that register with the OJK, which may be caused by a lack of capital and knowledge of Islamic business rules. Constraints that hinder the development of Islamic financial technology are the large number of illegal financial technologies that thrive in Indonesia, inadequate infrastructure, public awareness of Islamic finance is still low, and the quality of human resources is still not optimal.

E. CONCLUSION

Indonesia has a huge potential advantage in developing the Islamic finance industry. The large population with a Muslim majority population is more than sufficient capital in developing the Islamic finance industry, including financial technology that operates in accordance with Islamic principles and rules. Opportunities for the development of Islamic financial technology are also supported by the fact that financial inclusion is low in Indonesia, where there are still many Indonesians who do not have access to formal financial institutions. The existence of Islamic financial

technology that prioritizes easy access services through technology media is one of the advantages compared to formal financial institutions in the banking sector. People who do not have access to the banking sector can take advantage of Islamic financial technology. In addition, this study shows that the existence of Islamic financial technology can be a solution to improve government programs to increase public financial inclusion, which is still low.

Islamic technology finance has a more positive impression when compared to conventional technology finance. There are a number of things that support this impression, namely Islamic financial technology is seen as more capable of realizing the transparency of financial activities; Islamic financial technology is seen as more capable of creating opportunities for a wider range of customers, both households and businesses, to access Islamic financial services; Islamic financial technology is seen as more capable of providing investments that are more Islamic in nature; Islamic financial technology also has the potential to reduce risks for consumers because it follows strict rules to enforce justice for all parties; collaboration of financial technology with traditional FIs such as Islamic banks and Islamic insurance is very possible; Islamic financial technology is also seen as more stable and more resilient. Therefore, Islamic financial technology deserves to be a solution for needs that cannot be served by conventional/traditional financial services. Moreover, the data shows that Indonesia has a very large market for MSME players, reaching 99%.

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