Edusentris: Jurnal Ilmu Pendidikan dan Pengajaran
p-ISSN 23560703 | e-ISSN 24422592
https://ejournal.upi.edu/index.php/edusentris/index

Opportunities and Challenges of Sharia Financial Technology Governance in Indonesia: A Literature Review

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ABSTRACT

The purpose of this study is to provide an overview of the opportunities and challenges of financial technology governance in Indonesia. The method used in this study is a literature review, which is to analyze and review various scientific journals, both national and international journals published in the last 10 years and filtered as many as 30 articles related to sharia fintech. The results of this study indicate that sharia fintech already present in Indonesia are sharia Peer to Peer lending (P2P), payment services (sharia clearing and settlement), sharia e-aggregators as well as sharia risk management and investment. As for opportunities fintech Sharia law in Indonesia has such great potential to develop, this can be seen from various factors, namely, the large number of Muslim populations in Indonesia so that the market share of fintech services is very clear, supported by the existence of sharia institutions that already exist in Indonesia and various companies providing services. supporting technology. Meanwhile, the challenges of sharia fintech in Indonesia, namely the unequal mastery of technology in society, fears of the rise of cyber crime and the most significant is the absence of special laws related to the implementation of sharia fintech in Indonesia.

ARTICLE INFO

Article History:
Submitted/Received: 11 May 2024
First Revised: 30 May 2024
Accepted: 15 April 2024
First Available online: 1 July 2024
Publication Date: 1 Juli 2024

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Keyword: *Sharia financial technology, Sharia fintech, Opportunities, Challenges.*

1. INTRODUCTION

Today the development of technology is increasingly rapid, technology penetrates all aspects of human life. Technology was created based on the results of human thought to make life easier. This thinking continues to develop to be able to answer various obstacles faced by the community. Currently, the limited distance and time are not an obstacle in carrying out various activities, this is a positive impact of the presence of technological developments (Marpaung, 2018). With the existence of technology, in addition to having a positive impact, there are also some negative impacts that it causes, including reducing the number of job vacancies, because they are replaced by a machine. However, for the current Z generation technology is a must (Ameliola & Nugraha, 2013). Various activities are required to use technological advances, such as the presence of online shopping platforms, digital books, digital newspapers and also daily transportation facilities that can only be ordered online through an application on a smartphone (Yunus et al., 2018).

Not to forget the financial world is also certainly one of the sectors that follow the development of this technology, hence the term financial technology emerged. The concept of financial technology (fintech) is the development of technology combined with the financial sector in banking institutions, so that it is expected to facilitate a more practical, safe, and modern financial transaction process, including digital-based financial services that are currently developing in Indonesia (Martinelli, 2021). Communities need transparent financing alternatives as well as more efficient financial service costs. Various payment media are facilitated by the existence of a mobile application or internet banking, even for certain transactions it is no longer possible to use manual payments, but can only be done through the application. This progress saves a lot of time, because people no longer need to go to the bank or to an ATM to collect cash (Korwatanasakul, 2020). Various payment transactions can be done at home only with a smartphone.The internet and smartphones have changed people's behavior in shopping (Abdillah, 2019). There are several main reasons for the emergence of fintech companies. First, the global financial crisis of 2008, where the cause of the crisis was the lack of a traditional banking system (Yao et al., 2018). Second, the emergence of new technologies that support mobility, ease of use (visualization of information), speed and lower costs of financial services (Saksonova & Kuzmina-Merlino, 2017).

In addition to all the conveniences offered, another added value of this financial technology is that every transaction we make is automatically recorded properly by the system (Ridwan, 2020). So, in terms of recording, our transactions are safer and make it easier to track the financial activities we have done. The shift from bank driven to consumer driven will open up space for many parties in the financial services industry. Advances in information technology and communication devices have changed business processes, including financial transactions. Previously, many financial transactions were carried out directly, now it is enough to do it online. In online transactions, both customers and sellers will make transactions through a number of applications. This trend has changed the world economy and Indonesia into the digital economy era. Likewise, sharia-based economic activities must follow this change, namely various financial transactions must be combined with the existence of financial technology. But as we know that the basic principle of Islam is monotheism. Tawhid in the economic field is placing Allah as the Almighty Owner who is always present in every breath of human life (Jairin, 2019).

Indonesia is a country with the largest Muslim population in the world, which means that the Muslim population is very dominant, but unfortunately sharia-based banking services are still very minimal. Banking activity services in Indonesia are still dominated by conventional banking (Abadi et al., 2020). Therefore, the opportunity for the development of sharia-based banking or financial services is still wide open, because the Muslim paradigm in Indonesia has begun to open up and realize the importance of various activities, including financial activities that use the sharia basis. Based on this explanation, of course, not all changes can be done just like that in sharia-based financial services. There are many things that must be considered that are adapted to Islamic law so that the application of sharia financial technology, especially in Indonesia, can be truly in accordance with sharia principles. Islam completely. The basic principle in carrying out financial transactions in Islam is that it must be in accordance with the Qur'an and Al-Hadith (Nurfatah & Diana, 2022). Sharia fintech is a sharia-based financial service that uses sharia contracts and principles to avoid unwanted things, namely haram, vanity, syubhat, maysir and garar (Yarli, 2018). This is confirmed by Aulia et al. (2020) that sharia fintech must follow three Islamic principles, namely the prohibition of maysir (gambling), usury (the amount of interest that exceeds the provisions) and garar (uncertainty).

According to Salman & Nawaz (2018), there are wide gaps and differences between the conventional system and the sharia system in various fields. Basically, the Muslim community tends to entrust their finances more to Islamic financial institutions. Basically, the contract contained in fintech as long as it does not conflict with sharia principles, it is allowed (Narastri, 2020). In addition, fintech refers to one of the other muamalah principles, namely at-taradhin which means mutual pleasure between the two. With this fintech, it is an effort to make it easier for everyone to transact and invest based on sharia principles. Fintech growth in Indonesia is relatively stable even during the COVID-19 pandemic (Tripalupi & Anggahegari, 2020).

As the country with the largest Muslim population in the world, Indonesia has tremendous prospects for the sharia fintech industry. However, based on transaction volume, Indonesia's sharia fintech market size is still below Malaysia, Saudi Arabia and the United Arab Emirates (UAE). Based on data from The Global Islamic Economy Indicator (GIEI) Index, Indonesia's score is fourth after Malaysia, Saudi Arabia and the UAE. Malaysia sits at the top of the GIEI Index with a score of 207.2, followed by Saudi Arabia at 97.8, and the UAE at 90.2, while Indonesia scored 68.5. The GIEI index shows which countries are most conducive to the growth of the Islamic fintech market and ecosystem (Dinar Standard, 2022) (see **Figure 1**).

Indicator score breakdown for Top 15 ranking countries

		GIEI	Islamic Finance	Halal Food	Muslim-Friendly Travel	Modest Fashion	Pharma and Cosmetics	Media and Recreation
1	Malaysia	207.2	426.9	123.4	193.5	46.0	15.5	97.3
2	Saudi Arabia	97.8	218.6	56.6	69.2	19.3	15.8	29.7
3	UAE	90.2	114.6	63.3	78.6	171.8	30.9	63.8
4	Indonesia	68.5	91.0	71.1	58.0	68.0	31.3	26.8
5	Turkey	67.3	51.0	69.8	106.7	95.1	31.5	53.5
6	Bahrain	66.7	121.9	44.5	89.3	18.6	29.4	30.1
7	Singapore	65.0	45.0	57.8	107.1	48.3	23.5	78.5
8	Kuwait	62.1	115.5	43.1	69.0	17.5	60.8	29.2
9	Iran	56.0	90.3	48.1	52.1	25.4	15.7	24.9
10	Jordan	51.8	72.1	51.3	58.4	19.3	10.6	25.7
11	Oman	47.8	74.5	46.1	43.2	20.2	21.4	25.9
12	Qatar	46.9	73.4	43.4	40.1	21.6	31.5	30.8
13	United Kingdom	46.1	49.0	47.4	31.4	41.9	10.7	52.9
14	Kazakhstan	45.2	46.0	59.2	60.8	26.6	11.4	26.4
15	Pakistan	44.9	65.7	48.3	38.7	26.4	29.4	11.0

Figure 1. Score the Global Islamic Economic Indicator.

Therefore, the author wants to be able to provide an overview related to the application of financial technology that occurs in Indonesia. So that it can be used as a reference in conducting research for further research, and more broadly it is hoped that this study can be used as consideration for stakeholders to take further policy steps to make Indonesia the largest sharia center in the world according to President Joko Widodo's statement at the inauguration of the opening of the 2nd Community Economic Congress The Indonesian Ulema Council (MUI) is committed to becoming the center of the sharia economy in 2024 and will work hard to achieve it (Kominfo, 2021).

2. METHODS

The research method that the researcher uses is a systematic literature review. This research is descriptive analysis, namely research by describing the data that has been obtained regularly and providing an understanding to be useful and understandable by the reader. This literature review started with data collection by conducting a simple search through the Google Scholar page “Sharia financial technology in Indonesia”. The search results were 12,700 articles from various national and international journals and e-books. The articles used are data from the last 10 years to produce and get articles that are up to date and relevant to the themes discussed, and 30 articles were filtered.

3. RESULTS AND DISCUSSION

Financial technology or more familiar with the term fintech which literally means financial technology, the financial technology in question is where various financial activities are assisted or supported by using technological sophistication (Saptia, 2018). This does not only apply to conventional financial services. However, this also applies to financial services provided by Islamic financial institutions which are often referred to as Islamic fintech. Basically, the purpose of using technology is to make it easier for humans (Cholik, 2021).

Figure 2 contained in the Global Islamic Fintech Report 2021 (Dinar Standard, 2021) describes the framework related to sharia fintech, the subjects or actors involved in sharia fintech are customers as service users, business people who sell goods and services and financial institutions that provide financial services. These parties carry out various types of financial transactions, ranging from those related to social activities, namely *waqf, zakat* and *sodaqoh* or protection such as sharia insurance. Then matters relating to savings and investment include various transactions for managing pension funds, education savings, personal savings, asset management and so on. And of course, related to funding activities, there are various types of transactions such as payment services, peer to peer landing, transactions in the Islamic capital market, e-wallet, platforms and so on. These various financial transactions during the industrial 4.0 era were supported by the development of various technologies ranging from machine learning, big data, blockchain, cybersecurity, cloud and many more. All of these components make up a new ecosystem that we can call the Islamic fintech or sharia fintech, these components are interrelated with each other, and of course must be supported by various things in order to run perfectly. This ecosystem can run well with the support of various parties, including legal advisors and of course sharia consultants, clear regulations, both globally and nationally from a country, there are sharia institutions, there are companies that provide appropriate technology and support from educational institutions related to sharing research that can support the development and progress of sharia fintech.

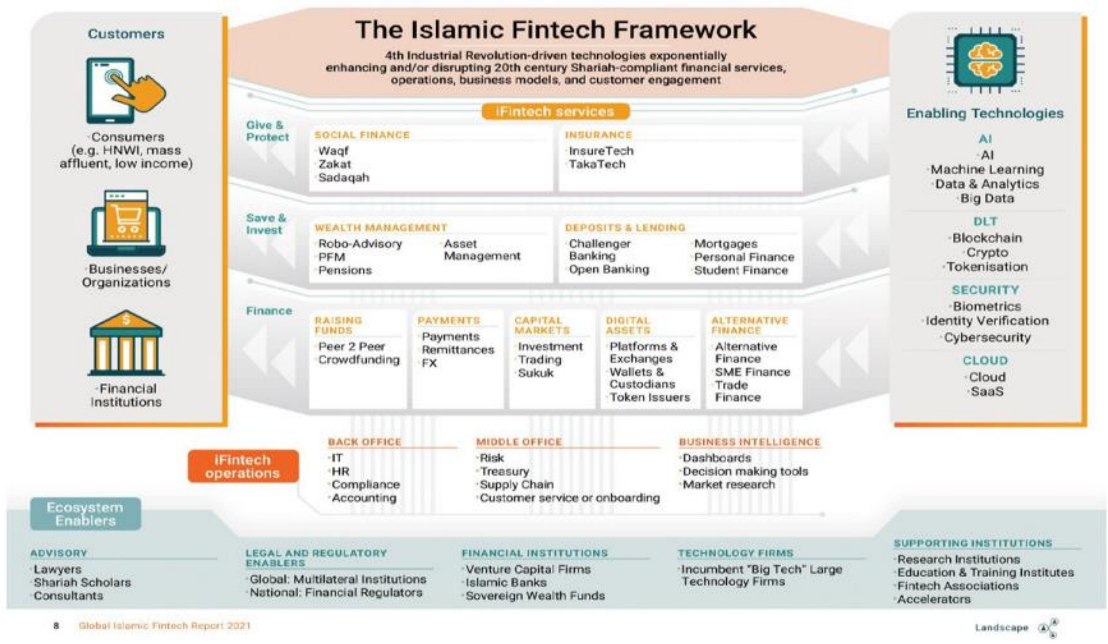

Figure 2. Sharia Fintech Framework

In Indonesia, the definition of financial technology is emphasized in Bank Indonesia Regulation Number 19/12/PBI/2017, namely the use of technology in a financial system that produces new services, products, business models, and/or technology, and can have an impact on the financial system, monetary stability, and/or efficiency, reliability, security, and smoothness of the payment system. Financial technology (fintech) is meant to include financing, payment systems, investment management, market support, risk management, capital provision, loans and other financial services. In addition to regulations from Bank Indonesia, there are other regulations that support the implementation of financial technology, namely a regulation from the Financial Services Authority (OJK) Number 77/PJOK.01/2016 77/PJOK01/2016 concerning information technology-based lending and borrowing services. Basically, the existing regulations are still generally limited to conventional banking and financial activities. There are no specific regulations related to the implementation of Islamic banking/financial services. In this regulation it is stated that it is not allowed to lend money and must be purely an intermediary, prohibited from issuing debt securities in any form, only from equity so that it will not disturb other existing financial industries, especially conventional banks and capital markets.

4. DISCUSSION

The MUI fatwa is a stipulation or assessment issued by the MUI on matters concerning the lives of Muslims. According to sharia, a fatwa is an elaboration of Islamic law relating to fiqh from the Qur'an, Sunnah and ijtihad on a particular issue. The fatwa outlines religious obligations (faraidl), limits (hudud) and determines whether something is lawful or unlawful. The fatwa issued by the MUI National Sharia Council (DSN-MUI) is considered a binding positive law. In Indonesia, fatwas are often further legitimized through regulations issued by government agencies, thus providing a binding nature for sharia economic actors. DSN-MUI (National Sharia Council-Indonesian Ulema Council) was formed as a manifestation of the realization of the aspirations of Muslims regarding economic issues and to encourage the application of Islamic teachings in the economic/finance sector which is carried out in accordance with the demands of Islamic law. Some of the duties and functions of the DSN-MUI are to: 1) Issue fatwas on sharia economics as a guide for practitioners and regulators, 2) Issue letters of recommendation, certification and sharia approval for sharia financial institutions and businesses, c) Supervise sharia aspects on products/services in sharia financial/business institutions.

Problems will arise among the community and sharia economic actors regarding the halal or haram of a type of fintech. So far, there are two MUI fatwas that regulate sharia fintech, namely MUI fatwa Number 117/DSN-MUI/II2018 concerning Information Technology-Based Funding Services Based on Sharia Principles which defines sharia fintech as providing financial services based on sharia principles. In other words, Islamic fintech includes the use of technology in financial services, both bank and non-bank and fatwa Number 116/DSN-MUI/IX/2017 concerning Sharia Electronic Money. However, this existing fatwa only regulates Sharia P2P lending and Sharia Electronic Money. The MUI fatwa has not regulated other types of sharia fintech such as sharia clearing and settlement payments, sharia aggregators and sharia crowdfunding. The existing fatwa only covers certain aspects of the fintech industry, this can be one of the obstacles to the survival of sharia fintech. This is in line with the findings of Aulia et al. (2020) in his research states that in Indonesia neither BI nor

OJK has issued special regulations related to sharia fintech, regulations issued by BI and OJK are only related to fintech management in general, related to sharia fintech only confirmed by the DSN-MUI fatwa. However, basically Islamic economic law has developed the same as other conventional law, namely that with the existence of technology it makes the process of financial transactions easier but still adapted to sharia law (Wahyuni, 2019).

The fintech that is already present in Indonesia (Muryanto et al., 2022) is Peer to Peer lending (P2P) Sharia. This fintech offers online loans with a sharia-based profit-sharing system without collateral. Sharia payment, clearing and settlement. This type of fintech provides sharia-based digital payments that do not contain usury. Cooperating with Islamic banks so that the accumulated balance is stored in Islamic banks. Sharia e-aggregators, namely providing product comparisons, such as features, prices or benefits, they are tasked with collecting Islamic financial products with complete data. As well as Islamic Risk and Investment Management, namely services that provide savings, investment and financial planning for various types of Islamic investment products. In Indonesia itself, the limits and obligations that sharia fintech actors must comply with according to religious teachings are also still unclear. In addition to the MUI fatwa regarding limited fintech, the sharia fintech industry in Indonesia also faces challenges because the country does not yet have a law (UU) that specifically regulates fintech in general. The fintech law will serve as consumer legal protection, prevention of illegal fintech practices and mitigation of systemic risk in digital financial services in Indonesia. Although the sharia fintech law is not yet well available, its growth in society is developing well.

The growth of the sharia fintech industry in Indonesia is triggered by several factors (Muryanto et al., 2022). First, from an institutional perspective, Indonesia has a strong institutional system to support the sharia economy. Indonesia has the Indonesian Ulema Council (MUI) and the National Committee for Sharia Economy and Finance to support the sharia economic ecosystem. Second, the Islamic economy in Indonesia continues to grow. This can be seen from the results of The State of the Global Islamic Economy Report 2022 noting that Indonesia's ranking for the global Islamic economy increased from 10th position, rose to 5th position and then rose again to 4th position. The first place is Malaysia, the second is Saudi Arabia, followed by the UAE and Indonesia. The increase in Indonesia's ranking is strongly influenced by the growth of several sharia economic sub-sectors such as sharia finance, travel, halal food, fashion, tourism, media, pharmacy and cosmetics (Dinar Standard, 2022) (see **Figure 3)**.

p-ISSN 2356-0703| e-ISSN 2442-2592

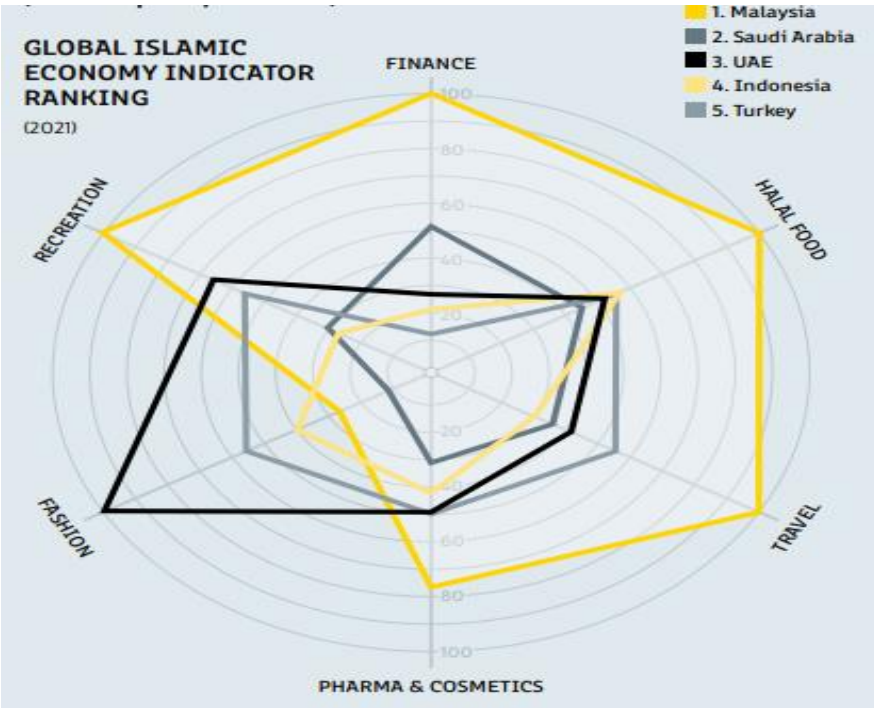

Figure 3. Global Islamic Economy Indicator Ranking

Third, Indonesia has strong support from Islamic organizations and community groups that foster Islamic economics. Some examples include the Indonesian Sharia Bank Association, the Indonesian Sharia Fintech Association, the Islamic Economic Study Gathering Forum, the Indonesian Islamic Economist Association and the Islamic economic community. These community groups encourage and contribute to the development of the Islamic economy in Indonesia. These factors give rise to opportunities for Islamic fintech to grow in Indonesia (Hiyanti et al., 2020). These opportunities include, the Financial Services Authority (OJK) offers the opportunity for sharia fintech players to officially register their technology with the OJK, then the availability of technological facilities for operations, investment and grants, the existence of fintech cases and phenomena that commonly occur in the community, and the majority of Indonesia's population is Muslim and currently there are more than 207 million Muslims in Indonesia. This can help open up opportunities for Islamic fintech in Indonesia to continue to grow.

The existence of sharia fintech in Indonesia gives color to the financial services sector in Indonesia (Baidhowi, 2018). As for some of the impacts and risks of using sharia fintech, among others, is that fintech has the potential to become a headline in the financial market, which can lead to a decrease in the price of financial services, due to the absence of a dominant intermediary in the market. This is in line with what was stated by Sari (2018) that with price changes, competition changes, due to decreased service costs. However, this can also have implications for increasing transparency which can minimize information asymmetry. Furthermore, with this fintech, it opens up opportunities for various parties and groups to be able to access sharia services because fintech can provide convenience, speed of service and cost efficiency and convenience for consumers (Wijayanti & Riza, 2017), this condition can also encourage risk diversification so that can generate sustainable economic growth. Then Subagiyo (2019) stated that with the emergence of Islamic fintech, it could create job and investment opportunities.

Then the existence of sharia fintech also encourages the pillars of the Indonesian economy, namely MSMEs, because with relatively easier requirements it makes it easier for MSME actors to get capital according to Islamic sharia, so MSME actors can grow faster. This is one of the advantages of Islamic fintech compared to other financial services (Saripudin et al., 2021). In addition to the various positive impacts caused by the existence of sharia fintech applications in Indonesia, there will be various risks that must be faced because technology is closely related to the use of the internet network, it is feared that cybercrime will emerge, namely the emergence of hackers who can damage the systems and technology networks that we use. have and have a negative impact on the operations of fintech companies that can cause losses for the company.

In addition to the opportunities that are present, the challenges that arise in the growth of sharia fintech in Indonesia are the lack of permits and capital to establish sharia fintech, making only 4 sharia fintechs registered with the OJK, rural communities lack the knowledge to operate sharia fintech, people think they are not there are differences between sharia fintech and conventional fintech, the lack of human resources (HR) who master transaction contracts based on sharia principles and future technological competition (Hiyanti et al., 2020). In addition, a serious threat in the implementation of fintech in Indonesia is the emergence of many illegal fintech practices (Hidajat, 2020) if left unchecked, of course this can endanger sharia fintech consumers in Indonesia and cause liquidity problems. Then the Indonesian fintech sector has a fairly high potential for disputes. The number of complaints on fintech services can represent this problem. Further Hasan Hasan et al. (2020) stated that the main challenges in the growth of sharia fintech are often accountability, transparency, and sharia compliance. In addition, the challenge in sharia fintech is also the frequent occurrence of misuse for terrorist financing (Al-Suwaidi & Nobanee, 2020). Then related to customers, there are still many complaints from customers regarding fintech services, most of the complaints are related to the lack of information provided by fintech service providers to customers, including related to interest rates and administrative fees, there are even billing cases which in the process use criminal acts such as fraud., threats, slander, sexual harassment and illegally distributed personal data (Yozami, 2019). Besides that, what is considered a weakness of the implementation of sharia fintech in Indonesia is that a strong internet network is needed and the existence of cyber crime which reduces the interest of customers to use this fintech (Iriani, 2018). And what has been found from several studies related to the constraints and challenges of implementing fintech in Indonesia is that there is no specific law governing the implementation of sharia fintech in Indonesia (Kharisma, 2021).

5. CONCLUSION

Based on the results of studies from various articles related to Islamic financial technology, sharia fintech already present in Indonesia are sharia Peer to Peer lending (P2P), payment services (sharia clearing and settlement), sharia e-aggregators as well as sharia risk management and investment. As for opportunities, basically, financial technology in

Indonesia has enormous potential to be developed considering various supporting factors, including the large number of Muslim communities in Indonesia, supporting institutions, namely The Indonesian Ulema Council (MUI) and the National Committee for Sharia Economics and Finance as well as sharia economics in Indonesia are continuously developing, which means that public awareness and needs for various sharia-based economic activities have emerged, this can certainly facilitate the development of MSME businesses that require fund assistance with an easier mechanism through peer to peer lending. However, of course, there are still challenges that must be faced for this sharia fintech, including in terms of human resources, namely the ability to use technology in Indonesia is not evenly distributed, the risk factor for using technology is that it is feared that cyber crime will become more widespread that will harm the community, and most importantly, the biggest challenge is that in Indonesia there is no special law that regulates sharia fintech, thus making the perpetrators do not have clear technical instructions related to this fintech, besides that it also strengthens various concerns over cyber crime actions are getting bigger. So far, in Indonesia, sharia fintech financing products are not yet familiar to the public. However, if there are official regulations from the government, then the legality of the services provided by various Islamic Financial Institutions will get high trust from the public. Researchers hope that this study can be used as an initial illustration to conduct research related to sharia fintech in Indonesia, and for further researchers to add direct research in the field, because this study is still limited based on the results of a review of several journal articles.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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