# ISLĀMIYYĀT 44(1) 2022: 89 - 99 (https://doi.org/10.17576/islamiyyat-2022-4401-8)

# Implications of Shariah Financial Technology in Increasing Financial Inclusion to Micro, Small, and Medium Enterprises

# Implikasi *Fintech* Syariah dalam Peningkatan Inklusi Keuangan pada Usaha Mikro, Kecil, dan Menengah

## Mirza Hedismarlina Yuneline

#### ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) have long been understood as playing a significant role in the economic development of a country. However, MSMEs have not been able to make a significant contribution to the economy due to constraints of capital problems and limitations in meeting the requirements of bureaucracy and banking administration when applying for loan funds from banks. Due to the limited services provided by banks, the emergence of financial technology (fintech) innovation is an opportunity for MSMEs to overcome their capital problems. However, the use of fintech triggers risks borne by users or consumers such as cyber risks related to data security, data ownership, privacy, and data governance. Shariah-based fintech is one solution to extend financial inclusion to MSMEs to overcome their capital problems. The purpose of this research is to analyze the development and the contribution of Shariah fintech in strengthening the financial inclusion of MSMEs. The method used in this qualitative descriptive research is by describing and interpreting the observations and findings of 5 Shariah fintech platforms that focus on MSMEs' funding as the research sample. The result shows that the market share of Shariah fintech is 2.01% of the total fintech platform and it is caused by the lack of Shariah financial literacy. In terms of risk, even though the financing risk is relatively lower than Bank's Non-Performing Loan, other risks may arise, such as cyber risk and Shariah compliance risk. In order to mitigate the risks, the authority needs regulations for cyber security for consumer protection and supervision of Shariah council of the Indonesian Ulama Council.

Keywords: Sharia; financial technology; Micro, Small and Medium Enterprises (MSMEs); risk management; financial inclusion

#### ABSTRAK

Usaha Mikro Kecil dan Menengah (UMKM) telah lama dipahami memiliki peran signifikan bagi pembangunan ekonomi suatu negara. Tetapi UMKM belum dapat memberikan kontribusi signifikan terhadap perekonomian dikarenakan UMKM juga terkendala persoalan permodalan dan memiliki keterbatasan dalam memenuhi birokrasi dan administrasi perbankan dalam pengajuan pinjaman dana dari pihak perbankan. Dengan adanya keterbatasan layanan dari perbankan sendiri, munculnya inovasi dengan adanya financial technology (fintech) ini merupakan peluang yang dapat diambil oleh UMKM untuk mengatasi masalah permodalannya. Tetapi di sisi lain penggunaan fintech ini memicu risiko yang ditanggung oleh konsumen, seperti cyber risk yang terkait dengan keamanan data, kepemilikan data, privasi, serta tata kelola data. Tujuan dari penelitian ini adalah menganalisis perkembangan dan kontribusi fintech syariah dalam memperkuat inklusi keuangan UMKM. Metode yang digunakan dalam penelitian ini adalah penelitian deskriptif kualitatif dengan mendeskripsikan dan menginterpretasikan hasil observasi serta temuan dari 5 platform fintech syariah sebagai sampel yang menjadi sumber pendanaan bagi UMKM. Hasil penelitian menunjukkan bahwa pangsa pasar fintech syariah sebesar 2,01% dari total platform fintech, hal tersebut disebabkan oleh kurangnya literasi keuangan syariah. Dari sisi risiko, meskipun risiko pembiayaan relatif lebih rendah dibandingkan Non Performing Loan Bank, namun risiko lain dapat muncul, seperti risiko cyber dan risiko kepatuhan dalam pelaksanaan hukum Syariah. Untuk memitigasi risiko tersebut, pihak otoritas perlu mengatur keamanan siber untuk perlindungan konsumen dan juga pengawasan kepatuhan Syariah oleh Dewan Syariah Nasional Majelis Ulama Indonesia.

Kata kunci: Syariah; Financial technology; Usaha Mikro, Kecil, dan Menengah; manajemen risiko; inklusi keuangan

#### **INTRODUCTION**

Micro, Small, and Medium Enterprises (MSMEs) have long been understood to have a significant role in the economic development of a country. Specifically, the existence of MSMEs is believed to be able to contribute to poverty alleviation efforts through job creation (Yuneline 2018). Based on the data from the Ministry of Cooperatives and Small Medium Enterprises (2018), micro-scale business was dominating with 98% market share.

		middle i.i	Busiliess Seule of	i ilioileo			
Business Scale	2016		2	2017	2018		
	Amount (unit)	Market Share (%)	Amount (unit)	Market Share (%)	Amount (unit)	Market Share (%)	
Micro Business	60,863,578	98.71	62,922,617	98.70	64,194,057	98.68	
Small Business	731,047	1.19	757,090	1.20	783,132	1.22	
Medium Enterprises	56,551	0.09	58,627	0.09	60,702	0.09	
Large Enterprises	5,370	0.01	5,460	0.01	5,550	0.01	

TABLE 1. Business Scale of MSMEs

Source: Kementerian Koperasi Dan Usaha Kecil Dan Menengah - Www.Depkop.Go.Id, (2018)

However, within a fairly large number and promising business potential, MSMEs have not been able to make a significant contribution to the economy. It is not deniable that apart from the issue of efficiency, effectiveness, and business ability, the MSME sector is also constrained by capital problems (Widyaningsih 2018). Based on Muhammad and Nissa (2020), the number of MSME credit accounts provided by banks in Indonesia is Rp. 16.4 million accounts with total financing of Rp. 1,037.6 trillion. According to Mulyani and Soenhadji (2020), MSMEs still have limitations in fulfilling the bureaucracy and banking administration in applying for a loan from banks. There were only 20% to 22% of MSMEs that enjoy credit facilities per year. Furthermore, Yuneline (2020) showed that 43% of MSMEs in Bandung intended to prefer funding from non-banking sources, such as equity, family loans, cooperatives, pawnshops, or peer-to-peer lending.

With the limited services provided by banks themselves, the emergence of innovations in the presence of financial technology (fintech) is an opportunity that can be taken by MSMEs to overcome their capital problems. According to Lee and Teo (2015), fintech is an innovation in the form of financial products and services through the optimization of information technology. Hsueh and Kuo (2017) revealed that there are three types of financial technology, such as, 1) Third-party payment systems, such as cross-border e-commerce, mobile payment systems, e-wallet; 2) Peer-to-Peer (P2P) Lending is a platform that brings lenders and borrowers together via the internet. Peer-to-Peer Lending provides credit and risk management mechanisms. This platform helps lenders and borrowers meet their respective needs and make efficient use of money; 3) Crowdfunding is a practice of funding a project or a venture by raising small quantities of money from a lot of people (Tedjamulia et al. 2005; Lasrado 2013; Rossi 2014). According to Yuneline (2018), there are several motivations in crowdfunding through this information technology platform, namely social returns, material returns, and financial returns. So that the information technology platform that can be utilized by MSMEs has financial return motives in the form of lendingbased and equity-based.

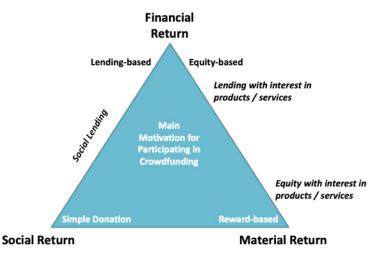


FIGURE 1. Motivation in Fundraising *Source*: Yuneline (2018)

Currently, the number of internet user in Indonesia reach around 132.7 million of people or around 51.5% of the total population. With more than 60 million MSMEs in Indonesia and almost 70% of MSMEs do not have financial access to formal financial institutions, the government encourages 6 million MSMEs for shifting to the digital platform to get financial access (Batunanggar 2017).

The most popular lending-based platform is peer-to-peer lending (P2P) or in Indonesia namely, Fintech Lending. The umbrella regulation for Fintech Lending is the *Otoritas Jasa Keuangan* – OJK (The Indonesia Financial Service Authority) Regulation No. 77/POJK.01/2016 concerning Information Technology-based Lending and Borrowing Services which allows lending and borrowing activities using the fintech platform.

The fintech innovation can increase financial literacy (Sugiarti et al. 2019) and financial inclusion (Irmawati et al. 2018) to provide opportunities for MSMEs to develop their businesses. However, Afdi (2017) argued that the use of fintech triggers risks borne by consumers, such as cyber risks related to data security, data ownership, privacy, and data governance. Another risk that arises is the proliferation of illegal Fintech Lending that had violation on Otoritas Jasa Keuangan Regulation No. 77/POJK.01/2016 which obliges the Fintech Lending to be registered in Otoritas Jasa Keuangan. Otoritas Jasa Keuangan through the Investment Alert Task Force has terminated 231 illegal Fintech Lending that does not have permits in February 2019.

The existence of Sharia-based fintech is one solution in financial inclusion efforts for the

development of MSMEs. Based on the Fatwa of the National Sharia Council of the Indonesian Ulama Council (*Dewan Syariah Nasional – Majelis Ulama Indonesia, DSN \_ MUI*) No. 117/DSN-MUI/ II /2018 concerning Information Technology Based Financing Services Based on Sharia Principles states that the Sharia fintech business must comply with Sharia principles, such as avoiding elements of usury, unclear contracts, elements of speculation, not being transparent, endangering people, harming wrongdoing parties and haram.

Sharia fintech lending faces several risks that may arise where the risks faced will vary depending on the financing scheme approved at the time of implementation of the contract. From another point of view, the technology will also intersect with regulations issued based on Sharia economics. The principles that are used can be compared and analyzed based on existing laws so that they can be diluted.

#### LITERATURE REVIEW

### FINANCIAL TECHNOLOGY

Based on Hsueh & Kuo (2017), financial technology is a new financial service model developed through information technology innovation. The impact of the industrial revolution was also felt in the financial industry. Fintech is growing very rapidly along with the growth of startups or information system-based businesses where customers or suppliers can transact or perform financial services directly. The evolution of fintech can be summarized in the following table:

Generation	Description	Period	Product
Fintech 1.0	The first wave of financial technology revolution stemmed from changes in global information transformation with the construction of the Trans Atlantic submarine cable	1866 - 1966	Telex and Diners Card
Fintech 2.0	Computer technology and data networks for electronic data communication	1967 - 1987	ATM and Bank mainframe computer
Fintech 2.5	The use of technology is integrated as part of an effort to develop existing financial institutions. One of the signs is the use of electronic banking and online transactions when transferring funds in banks	1987 - 2008	Online banking and electronic stock trading
Fintech 3.0 and Fintech 3.5	Electronic-based business development by fully using network data or an online system	2009 - now	Start-Up, payment apps, mobile wallets, blockchain, cryptocurrency

TABLE 2. Fintech Evolution

Source: Hsueh & Kuo (2017); Abdillah (2019)

The development of innovation in fintech has disrupted the financial services industry. Referring to Hariyono & Tjahjadi, the development of fintech creates new opportunities for economic activities more efficiently and effectively. The growth of global investment in fintech in 2015 took US\$20 billion, which increased 66% from the previous year. In Indonesia, fintech has contributed Rp. 25.9 million in the economy. Furthermore, Abdillah (2019) added that there are 4 (four) types of Fintech transactions that are developing in Indonesia, namely digital payments, personal finance, alternative lending, and alternative financing. Digital payments had become the highest transaction value by 18.20% growth during 2017 – 2021 and predicted growth by 7.94% for the next two years. Meanwhile, alternative lending had grown by 10.71% during 2017 – 2021 and is predicted still have room to grow by 7.05% until 2023.



FIGURE 2. Fintech Transaction Value in Indonesia Source: Abdillah (2019)

According to the Financial Services Authority (2016), the advantages of Fintech are: 1) Serving Indonesians who have not been served by the traditional financial industry due to strict banking regulations and the limitations of the traditional banking industry in serving people in certain areas. 2) To become an alternative to funding other than traditional financial industry services where people need a more democratic and transparent alternative financing.

Okoli & Tewari (2020) found that the study in Africa showed that fintech creates new opportunities by facilitated direct funding for economic development due to the poor innovation of African banks, however, the best solution to promote financial development in Africa is the collaboration of fintech and African Banks that can improve the bank efficiency and the financial inclusion

While the disadvantages of Fintech are Fintech is a party that does not have a license to move funds and is less well-established in running its business with large capital, when compared to banks. In addition, Some Fintech companies do not have physical offices and lack experience in carrying out procedures related to security systems and product integrity.

#### SHARIA FINTECH

Sharia fintech is an innovation that combines financial transactions through optimization of information technology carried out by financial service providers using contracts in the Sharia transaction scheme (Nafiah & Faih 2019). Transactions carried out by sharia fintech are generally the same as transactions in Islamic banking. It's just that there are differences in the contract between the functions of Islamic banking and Sharia fintech. For example, Islamic banks are subjects that are directly related to customers. Meanwhile, Sharia fintech functions as an intermediary between investors and their business partners, in this case, MSMEs (Muhammad & Nissa 2020)

Rahim, et.al. (2020) stated that Sharia Fintech is forbidden if there was clear evidence that Sharia Fintech has conflicted Sharia principles, *such as riba, masyir, ghahar, risywah, tadlis, israf,* and the transaction cost must be transparent without hidden cost.

The National Sharia Council (DSN) Indonesian Ulama Council (MUI) issued Fatwa Number 117 / DSN-MUI / II / 2018 concerning Information Technology-Based Financing Services Based on Sharia Principles to provide certainty for the basis of sharia for the implementation of sharia contract transactions held by Sharia fintech. The legal subjects regulated in this fatwa also include sharia fintech, recipients of financing (MSMEs), and providers of financing (investors). The contracts that can be applied in this service include: buying and selling, *ijarah*, *musyarakah*, *mudaraba*, *qardh*, *wakalah* and *wakalah bil al-ujrah*.

#### STATE OF THE ART

As explained above, MSMEs in Indonesia have the potential to increase economic growth as well as alleviate poverty because they can increase job opportunities. However, MSMEs themselves have capital problems and a low level of inclusion when it comes to financing from banks. Sharia fintech has the opportunity to provide financing to MSMEs by bringing together investors and business partners (MSMEs). It's just that problems of understanding, awareness, and adaptation both in terms of technology and the economy of Sharia become obstacles in the use of Sharia fintech by MSMEs. The positioning of this research is to focus on the problems faced by MSMEs, which are as follows:

TABLE 3. Research Positioning at MSMEs and Fintech Utilization Opportunities

No.	Research Positioning at MSMEs and Fintech Utilization Opportunitie	s Source
1	Capital limitations and access to credit in the banking	Widyaningsih (2018), Okoli & Tewari (2020)
2	Utilization of fintech in the development of MSMEs	Sugiarti (2019), Irmawati (2018), Mudzalifa (2018), Okoli & Tewari (2020)
3	Digital payment in MSMEs	Romadhon and Fitri (2020)
4	Transparent and efficient payment alternatives	Tedjasukmana (2020), Rahim et.al. (2020)
5	Fintech promotes efficiency and low transaction cost in a finance transaction	al Rahim et.al. (2020), Razali et.al (2021)

Meanwhile, the problems faced by Sharia fintech in its development are as follows:

TABLE 4.	Sharia	Fintech	Challenges
----------	--------	---------	------------

No.	Sharia Fintech Challenges	Source
1	High level of non-performing loans	Muhammad and Nissa (2020)
2	Information asymmetry due to limited valid information.	Suryono, et.al. (2019)
3	Sharia fintech regulations related to compliance and governance require the development	Muhammad and Nissa (2020)
4	Cyber risk and technology adoption is still lacking	Romadhon and Fitri (2020), Razali et.al (2021)

The challenges faced by Sharia Fintech involved the financing risk and the operational risk. The financing risk is related to the risk of potential financing failure considering the potential costumers are the unbankable MSMEs. The operational risk involved the cyber risk and the Sharia-Compliance Risk. Razali, et.al (2021) stated that high levels of security especially in data security are the most important in internet-based transactions. The Sharia-compliance issues become something very important in Sharia fintech because it involves sharia transaction contracts and stakeholders who know what should be implemented in Islamic financial transactions. For instance, the level of profit-sharing received might be unstable due to the model financing is carried out using a mudharabah or musyarakah contract. Consequences if the investor is dissatisfied with the transaction process because of the lack of Sharia financial literacy would be resulting in the decline in the reputation of sharia fintech providers.

#### METHODOLOGY

The approach used in this research is a literature study obtained from several sources. Based on the objective of this research, it is classified into qualitative descriptive research. Descriptive research means that this research describes and interprets the findings and observations regarding the Sharia fintech application platform that serves MSMEs business partners. In this case, descriptive analysis is also used to analyze the development of Islamic fintech and MSMEs and the contribution of the development of Islamic fintech to strengthening the financial inclusion of MSMEs.

In this study, the data used are secondary data. The data used in this study include:

1. The theory is taken from various works of literature.

2. The data are taken from the Sharia fintech platform and the regulators (Financial Services Authority).

In this study, a descriptive analysis explains how the response of MSMEs in the use of sharia fintech facilities. Monitoring will be carried out from MSMEs data in the Sharia fintech platform to determine the implementation and implications of the risks that may arise. The next analysis is to conduct a literature review related to the existing rules in the Islamic economy with the cases faced so that an understanding can be obtained based on different points of view.

Articles and journals related to the development of fintech are the basis for analyzing the risks that arise in the fintech application platform. In addition, related articles and journals can be used to analyze risk mitigation for emerging risks. Analysis of risk management and risk mitigation uses the perspective of Islamic financial institutions which will then formulate a strategy based on sharia values to mitigate risks that promote the principle of benefit.

#### **RESULT AND DISCUSSION**

Based on data from the *Otoritas Jasa Keuangan* (2020) showed that 149 Fintech Lending Companies are registered/licensed in the Financial Services Authority consist of 139 Conventional Fintech Lending and 10 Sharia Fintech Lending. Compared to last year there was a decrease in the number of registered/licensed Fintech Lending companies, previously there were 164 registered Fintech Lending with a composition of 152 Conventional Fintech Lending. With total assets of Fintech Lending of Rp. 3.71 trillion or an increase of 22.23% compared to last year. The following is the accumulated data for Fintech Lending nation-wide:

## Islāmiyyāt 44(1)

No	Description	2018		2019		2020	
		Total	Growth	Total	Growth	Total	Growth
1	Accumulated Loan Disbursement						
	a. Java Island	19.62 T	797.56%	69.82 T	255.93%	132.38 T	89.06%
	b. Outside Java Island	3.05 T	705.82%	11.67 T	282.93%	23.52 T	101.47%
2	Accumulated Borrower Account (entity)						
	a. Java Island	3,664,645	1,444.19%	15.397.251	320.16%	37.037.196	140.54%
	b. Outside Java Island	694,083	3.013,47%	3.171.872	356.51%	6.524.166	105.69%
3	Accumulated Lender Account (entity)						
	a. Java Island	155,230	104.8%	500,830	222,12%	581,455	16.28%
	b. Outside Java Island	50,281	109.28%	102.149	103,16%	131,578	28.821%
	c. Foreign	1,996	74.63%	3,756	88,18%	3,930	4.63%

TABLE 5. Growth of P2P Lending in Indonesia

Source: Statistik Fintech Lending Periode Desember (2020)

From Table 5, the total loan disbursement reached Rp. 155.9 trillion on December 2020. Referring to *Otoritas Jasa Keuangan* (2020), the Banking sector already disbursed credit for SMEs by Rp. 1,021.493 trillion in December 2020 which means Fintech lending can disburse loans for SMEs around 15.26% of SME credit disbursed by Bank. It has shown that fintech lending has the potential on

reached SMEs that have a lack of access to finance by the formal financial institution.

If we look further at sharia fintech lending, its market share is relatively small compared with conventional. By number, sharia fintech lending company only 6.7% of total fintech lending company and by asset, sharia fintech only 2.01% of total fintech lending company.

Description	Assets		Growth (%) yoy	Market Share (%)	
	2019	2020		2019	2020
Conventional Fintech	2,985,645,653,280	3,636,486,269,415	21.80	98.33	97.99
Sharia Fintech	50,618,571,149	74,677,072,107	47.53	1.67	2.01
Total Assets	3,036,264,224,429	3,711,163,341,522	22.23	100.00	100.00

Source: Statistik Fintech Lending Periode Desember (2020)

The main reason why Sharia Fintech Lending's asset is lower than the conventional's is due to less literacy. Referring to *Otoritas Jasa Keuangan*'s National Survey on 2016, Indonesia's Sharia financial literacy is 8% or lower than conventional financial literacy as 30% literate (Hakim & Irawan 2019). Furthermore, the Sharia financial inclusion rate is 11%, lower than the conventional financial inclusion rate of 68%. It is crestfallen, bear in mind that Indonesia is the biggest Muslim population in the world.

However, in term of Sharia Fintech Lending's growth, it is shown that there are more rooms for sharia fintech to grow. By the end of 2020, Sharia fintech lending assets' growth by 47.53%. That makes sharia fintech still have potential on increasing financial inclusion to SMEs considering that Sharia fintech lending is developing the financial

technology platform that avoids riba, masyir, ghahar, risywah, tadlis, israf, and other transactions that constraint with Islamic Law, which gives the advantage for Sharia fintech's users both lenders and borrower due to promoting on risk-sharing activity.

Referring to Fatwa of the National Sharia Council of the Indonesian Ulama Council (Dewan Syariah National-Majelis Ulama Indonesia, DSN-MUI) No. 117/DSN-MUI/II/2018, there are many *aqad* and risk-sharing mechanisms on Sharia Fintech's Lending transaction, such as:

- 1. Purchase and Sale Agreement is a contract between seller and buyer resulted in ownership transfer of goods.
- 2. *Musharakah* is a cooperation *aqad* between two or more parties in the business, in which each party that has a contribution on venture capital funds (*ra's al-mal*) provides the proportional

profit or based on agreement, while the loss is borne by each party proportionally.

- 3. *Mudharabah* is a cooperation *aqad* between the capital owner (*shahibu al-maal*) and the business owner (*'amil /mudharib*), with business profit share proportionally based on contract agreement while the loss is borne by the capital owner.
- 4. *Qardh* is a loan agreement with a clause that the borrower must return the loan timely and based on the agreement method.
- 5. *Ijarah* is an *aqad* for transfer of usufructuary of certain items or service in a certain time by payment of wages or *ujrah*.

- 6. Wakalah is an *aqad* of power delegation from *muwakil* to *wakil* for resolving certain legal actions that possibly represented.
- 7. Wakalah bi al-ujrah is an *wakalah aqad* with *ujrah* or fee.

From the total of 10 Sharia Fintech Lending that registered/licensed in Financial Service Authority, there are 5 Sharia Fintech Lending that focusing on SME's funding. The following data is Funding and Financing Aqad Mechanism in Sharia Fintech Lending:

No	Sharia Fintech Lending Platform	Funding Aqad	Financing Aqad	Description
1	PT. Ammana Fintek Syariah	1. Musharakah 2. Mudharabah	N.A.	MSMEs apply for financing at Baitul Maal wa Tamwil (BMT) and other Sharia Financial Institutions. Ammana becomes an intermediation agent between investors and the BMT.
2	PT. Qazwa Mitra Hasanah	<ol> <li>Mudharabah</li> <li>Murabahah</li> </ol>	1. Mudharabah 2. Murabahah	Qazwa provides financing with a supply chain financing scheme, where Qazwa will finance working capital loans that involve the supply chain system of MSMEs.
3	PT. Kapital Boost Indonesia	<ol> <li>Invoice Financing</li> <li>Murabahah</li> </ol>	<ol> <li>Invoice Financing</li> <li>Murabahah</li> </ol>	Invoice Financing is bailout funding for accounts receivable in the form of invoices, based on work or SME projects that have been completed, but still waiting for repayment from Bohir
4	PT. Alami Fintek Syariah	1. Qardh 2. Wakalah bil Ujrah	1. Invoice Financing	Invoice Financing in ALAMI is financing in the form of collection services for receivables based on invoice evidence, either accompanied or without a bailout ( <i>qard</i> ) given to business owners who have invoices to third parties
5	PT. Berkah Finteck Syariah	<ol> <li>Mudharabah</li> <li>Musharakah</li> </ol>	1. Murabahah	PT. Berkah Finteck Syariah act as agent through <i>Wakalah bi al Ujrah aqad</i>
Sour	ce: Data processed from Sharia	a Fintech Lending webs	sites (2021)	
		TABLE 8. Dat	ta of Sharia Fintech Ler	nding

IABLE 8. Data of Sharia Finteen Lending					
Description	Loan Disbursement (Rp)	Total SME/Project Fund	ткв90		
PT. Ammana Fintek Syariah	331,000,000,000	41,574	97.23%		
PT. Qazwa Mitra Hasanah	9,000,000,000	1,909	99.34%		
PT. Kapital Boost Indonesia	52,404,632,411	1,145	100%		
PT. Alami Fintek Syariah	484,000,000,000	107	100%		
PT. Berkah Finteck Syariah	373,300,000,000	60,189	95.53%		

Source: Data processed from Sharia Fintech Lending websites (2021)

96

Keberhasilan90 (TKB90) Tingkat is а measurement of the success rate of the fintech lending platform in facilitating the settlement of lending and borrowing obligations within a period of up to 90 days from maturity. Referring to table 5 below, the weighted average based on the total loan disbursement of TKB90 is 97.93%. This means the Tingkat Wanprestasi 90 (TWP90) or the level of default on the obligations above 90 days from maturity is 2.07%. Compare to the Non-Performing Loan (NPL) rate of SME's credit disbursement by Bank on December 2020 of 3.81%, Sharia Fintech Lending's financing risk is lower. Even though the financing risk of Sharia Fintech Lending (from the case of 5 Sharia Fintech Lending focused on SME's Financing) is relatively lower than Bank's NPL, but other risks may arise, such as:

1. Financing Risk

Financing Risk may face by capital owners due to business failure and investment loss. Since object financing is an MSMEs business that usually lacks knowledge and experience that may result in business failure. By the time MSMEs gain profit, usually, the profit won't be distributed but they allocate the funds for business expansion. It will result in a long lag for the capital owner to get the sharing profit. When the business continues to grow, usually it will need additional capital from another capital owner that may result in the sharing profit will be diluted.

- 2. Cyber risk is the risk that inherent to every IT-based transaction. The cyber risk is related to data privacy, data ownership, and data governance. Consumer protection for IT-based transactions is known very weak. On the other side, cyber risk can disrupt the sharia fintech's operational and other financial infrastructure. To mitigate the risk, the regulation regarding cyber consumer protection is important to protect every party, especially the capital owner. The legal protection of every party involved also needed to be put in the form of Aqad.
- 3. Sharia's Compliance Risk

The lack of regulation and Sharia financial literacy can cause the Sharia's Compliance Risk. To mitigate the risk, the supervision of Sharia's compliance by the National Sharia Council of the Indonesian Ulama Council is mandatory to achieve the *kemashalatan umah*. The supervision involved the Sharia Supervisory Board (*Dewan Pengawas Syariah* - DPS) as a mediator between Sharia Fintech and the DSN-MUI. It supervised all the parties involved from Sharia Fintech products, Sharia Fintech process, MSMEs, and the sharia Financial Institution such as *Lembaga Keuangan Syariah* (*LKS*) which designated intermediaries between MSME's and the sharia fintech.

The development of Sharia fintech lending in

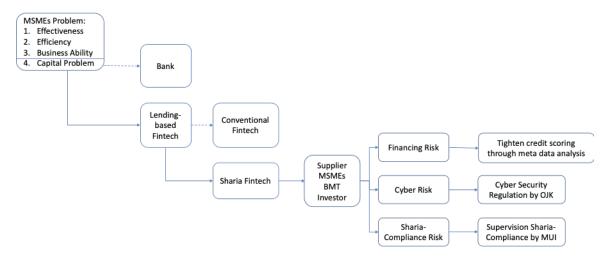


FIGURE 3. Framework Implication of Sharia Fintech in MSMEs

implementing financial inclusion has several opportunities and challenges. The opportunities for this Sharia fintech lending are:

1. The majority of Indonesia's population is Muslim by the condition around 70% are unbankable that can be used as a prospective target for Sharia fintech lending users.

- 2. Sharia economy continues to experience growth both globally and domestically.
- 3. The Indonesian government and the Indonesian Ulama Council support Sharia economic growth.
- 4. The potential for Indonesian people who are Muslim and obey the orders of the obligations of *zakat*, *donations*, *shodaqoh*, and *waqf* is increasing. Donation-based crowdfunding is feasible for financing MSMEs projects.
- 5. Islamic financial regulations in Indonesia has already existed but specifically for Sharia fintech lending is in the development stage so it will provide opportunities for innovation.

Meanwhile, the challenges that may arise are:

- 1. Lack of Sharia Financial Literacy such as understanding and awareness of sharia economy products, especially sharia fintech.
- 2. Economic growth is still dominated by conventional so that growth in Islamic finance tends to slow down and its market share is relatively small
- 3. The level of adoption of Sharia Fintech is low that may lead to cyber risk and sharia-compliant risk.

#### CONCLUSION

Fintech lending has the potential on increasing financial inclusion by having 15.26% of SME's loan disbursement comparing to the formal financial institution. Sharia fintech lending is considered to have the potential on increasing financial inclusion to SMEs due to developing the financial technology platform that avoids riba, masyir, ghahar, risywah, tadlis, israf, and other transactions that constraint to Islamic Law, which gives the advantage for Sharia fintech's users both lenders and borrower on promoting risk-sharing activity. The market share of Sharia Fintech Lending is relatively small comparing with the conventional. By number, sharia fintech lending company only 6.7% of total fintech lending company and by asset, sharia fintech only 2.01% of total fintech lending company. The main reason for the low-level adoption of Sharia Fintech Lending is less literate of Sharia Financial Literacy.

However, in terms of growth, it is shown Sharia fintech lending asset's growth by 47.53%. The weighted average of financing risk is also lower than NPL's rate of 2.07%. Even though the financing risk of Sharia Fintech Lending is relatively lower than Bank's NPL, but other risks may arise, such as

cyber risk and Sharia's compliance risk. To mitigate the risk, the authority needs to regulate regarding consumer protection, and also the supervision of Sharia's compliance by the National Sharia Council of the Indonesian Ulama Council in Sharia Fintech Lending activity is mandatory to achieve the principle of benefit.

The present study showed that the growth of Sharia Fintech has potential to promote economic development by financing the MSMEs, however, Sharia Fintech is left behind compared to the conventional fintech due to the low literacy of Sharia knowledge. The future study may explore the nexus quantitatively and qualitatively of lowlevel adoption of Sharia Financial Services. This will benefit the Sharia Fintech Providers, MSME's as consumers, and the Government to promote economic development with the spirit of *Maqasid al-Shariah*.

#### ACKNOWLEDGEMENT

This work was supported by the Research Fund provided by Ekuitas School of Business.

#### REFERENCE

- Abdillah, L.A. 2019. An Overview of Indonesian Fintech Application. *Proceeding: International Conference* on Communication, Information Technology and Youth Study (I-CITYS 2019)
- Afdi, M. 2017. Munich Personal RePEc Archive Financial Technology (Fintech): Its Concept and Implementation in Indonesia.
- Batunanggar, S. 2017. A Service of zbw Fintech development and regulatory frameworks in Indonesia. http://hdl.handle.net/10419/222781
- Fatwa of the National Sharia Council of the Indonesian Ulama Council (DSN-MUI) No. 117/DSN-MUI/II /2018 concerning Information Technology Based Financing Services Based on Sharia Principles
- Hakim, R., & Irawan, M. D. 2019. Islamic Rulings and Financial Technology (Fintech): An Analysis on the Relevance and Implications. *Madania: Jurnal Kajian Keislaman*, 23(2): 137–146. https://doi. org/10.1108/978-1-78973-545-120191019
- Hariyadi, A. & Tjahjadi, B. 2020. The Role of Intellectual Capital in the Development of Financial Technology in the New Normal Period in Indonesia. *Journal* of Asian Finance, Economics and Business, 8 (1): 217–224, https://doi:10.13106/jafeb.2021.vol8.no1. 217
- Hsueh, S.C., & Kuo, C.H. (2017), Effective Matching for P2P Lending by Mining Strong Association Rules, *Proceedings of the 3rd International Conference on Industrial and Business Engineering*

Implications of Shariah Financial Technology in Increasing Financial Inclusion to Micro, Small, and Medium Enterprises 99

- Kementerian Koperasi dan Usaha Kecil dan Menengah - www.depkop.go.id. 2021. Retrieved April 12, 2021, from https://kemenkopukm.go.id/data-umkm
- Lasrado, L. A. 2013. Crowdfunding in Finland A New Alternative Disruptive Funding Instrument for Businesses.
- Kuo Chuen LEE, D., S Teo, E. G., Kuo Chuen, D., S Emergence, E. G., LEE Kuo Chuen, D., Teo, E. G., Foo, P., Chang, S., Han, Z., & Yingying, C. 2015. The emergence of FinTech and the LASIC Principles Emergence of FinTech and the LASIC Principles Citation Citation Emergence of FinTech and the LASIC Principles 1. In *Journal of Financial Perspectives*, 3 (3). https://ink.library.smu.edu.sg/lkcsb research
- Muzdalifa, I., Rahma, I.A., dan Novalia, B.D. (2018). Peran Fintech dalam Meningkatkan Keuangan Inklusif pada UMKM di Indonesia. Jurnal Ekonomi dan Perbankan Syariah. 3(1): 227 –344
- Muhammad, R., & Nissa, I. K. (2020). Analisis Resiko Pembiayaan dan Resolusi Syariah pada Peer-To-Peer Financing. *Equilibrium: Jurnal Ekonomi Syariah*, 8(1). https://doi.org/10.21043/equilibrium.v8i1.6558
- Mulyani, A., & Soenhadji, I. M. (2020). Pengaruh Literasi, Inklusivitas, dan Minat Menggunakan Fasilitas Fintech Crowdfunding Terhadap Kinerja UMKM di Jabodetabek Dengan Variabel Intervening Up-Scale Bisnis. *Universitas Gunadarma*, 1–10.
- Nafiah, R., & Faih, A. (2019). Analisis Transaksi Financial Technology (Fintech) Syariah dalam Perspektif Maqashid Syariah. IQTISHADIA: Jurnal Ekonomi & Perbankan Syariah, 6(2) : 167–175. https://doi. org/10.19105/iqtishadia.v6i2.2479
- Okoli, T.T. & Tewari, D.D. 2020. An Empirical Assessment of Fintechs Heterogeneous Transmission Channels to Financial Development among African Economies, *Cogent Economics & Finance*, 8 (1) : 1-18, DOI: 10.1080/23322039.2020.1829273
- Otoritas Jasa Keuangan Regulation No. 77/POJK.01/2016 concerning Information Technology-based Lending and Borrowing Services.
- Statistik Fintech Lending Periode Desember 2020. 2020. Retrieved April 14, 2021, from https://www.ojk. go.id/id/kanal/iknb/data-dan-statistik/fintech/Pages/-Statistik-Fintech-Lending-Periode-Desember-2020. aspx
- Rahi, N.F., Bakri, M.H., & Yahya, S.N. 2020. Conceptualization of Spiritual Intelligence Quotient (SQ) in the Islamic Fintech Adoption, *ISLĀMIYYĀT*, 42(1): 113-122, https://doi.org/10.17576/islamiyyat-2020-4201-13
- Razali, M., Mohd, N.A., Hadigunawan, N. & Saidon, R. 2021. Maqasid Shariah HIFZ MAL in E-Wallet Application, *ISLĀMIYYĀT*, 43(1), 113 - 120, https:// doi.org/10.17576/islamiyyat-2021-4301-10

- Romadhon, F., dan Fitri A. 2020. Analisis Peluang dan Tantangan Penggunaan Financial Technology sebagai Upaya Optimalisasi Potensi UMKM (Studi Kasus UMKM di Gresik). *Jurnal TECHNOBIZ*, 3(1): 30-44
- Rossi, M. 2014. The New Ways to Raise Capital : An Exploratory Study of Crowdfunding. International Journal of Financial Research Vol 5 No. 2 : 8-18
- Sugiarti, E. N., Diana, N., Cholid Mawardi, M., Studi, P., & Program, A. 2019. Peran Fintech dalam meningkatkan Literasi Keuangan pada Usaha Mikro Kecil Menengah di Malang. Jurnal Ilmiah Riset Akuntansi. 8(4): 90-104.
- Suryono, R. R., Purwandari, B., & Budi, I. 2019. Peer to Peer (P2P) Lending Problems and Potential Solutions: A Peer to Peer (P2P) Lending Problems and Potential Solutions: A Systematic Literature Review Systematic Literature Review. *Procedia Computer Science*, 161, 204–214. https://doi.org/10.1016/j.procs.2019.11.116
- Tedjamulia, S. J., Dean, D. L., Olsen, D. R., & Albrecht, C. C. 2005. Motivating Content Contributions to Online Communities: Toward a More Comprehensive Theory. The 38th Hawaii International Conference on System Sciences, 2-10.
- Tedjasukmana, B. 2020. Membangun Lingkungan Bisnis UMKM dalam Pemanfaatan Digital Finance Technology. *Prosiding Seminar Teknologi Kebumian dan Kelautan (Semitan III)*, 2(1), 387-390
- Widyaningsih, N. 2018. Analisis Mitigasi Resiko FinancialtechnologyPeer To Peer Lending Dalam PenyaluranKredit Terhadap Umkm Di Indonesia(Studi Kasus Pada Pt. Amartha Mikro Fintek).
- Yuneline, M. H. 2018. Backers Behavior in Donation-Based CrowdFunding Project. Journal of Economic & Management Perspectives, 12(1), 307–315. https:// search.proquest.com/openview/5c9e77d8f02ad51bad 94f5bf27c60938/1?pq-origsite=gscholar&cbl=51667
- Yuneline, M. H. 2020. Financial Literacy and its Impact on Funding Source's Decision-Making. *International Journal of Applied Economics, Finance and Accounting.* 6(1), 1–10. https://doi.org/10.33094/8.2 017.2020.61.1.10

### AUTHORS

Mirza Hedismarlina Yuneline Management Study Program Ekuitas School of Business Jl. PHH Mustofa No. 31 Bandung 40124, Indonesia mirza.yuneline@ekuitas.ac.id