

ISLAMIC RULINGS AND FINANCIAL TECHNOLOGY (FINTECH): An Analysis on the Relevance and Implications

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Abstract: Industrial Revolution 4.0 has produced rapid technological developments to support the ease of human activity in all lines of life. In the economic and financial fields, this development is known as financial technology, commonly known as Fintech. Like two sides of a coin, financial technology offers ease of service in transactions, time efficiency, transaction flexibility, to increase financial literacy and information technology for the public. Conversely, some of the negative impacts of this financial technology include, the increasing culture of consumerism, hedonism to the practice of new style moneylenders that determine high-interest rates for borrowers online, as well as ways of billing outside the fair range. This study aims to conduct an in-depth analysis related to the role of Islamic rulings in the development of financial technology. The conclusions of this study are some of the roles of Islamic rulings in developing financial technology divided into three key aspects; *first*, as a preventive mechanism to avoid fraud transactions. *Second*, as a moral guide (ethical guidelines) to maintain that all transactions prioritize the principles of honesty and compliance with sharia principles. *Third*, as a means of socializing Islamic rulings (*muamalah fiqh*), especially in transactions that use financial technology instruments.

Keywords: Islamic rulings; financial technology; financial literacy; online business.

Abstrak: Revolusi Industri 4.0 menghasilkan perkembangan teknologi yang begitu pesat guna menunjang kemudahan aktivitas manusia dalam segala lini kehidupan. Dalam bidang ekonomi dan keuangan, perkembangan ini dikenal dengan teknologi finansial atau biasa dikenal dengan *FinTech* (*financial technology*). Ibarat dua sisi mata uang, teknologi finansial menawarkan kemudahan layanan dalam transaksi, efisiensi waktu, fleksibilitas transaksi, hingga peningkatan literasi keuangan dan teknologi informasi bagi masyarakat. Sebaliknya, beberapa dampak negatif dari teknologi finansial ini diantaranya adalah, meningkatnya budaya konsumerisme, hedonisme hingga praktik rentenir gaya baru yang menentukan bunga yang tinggi bagi para peminjam dana secara *online*, serta cara penagihan di luar batas kewajaran. Penelitian ini bertujuan untuk melakukan analisis secara mendalam terkait peran kaidah fikih dalam pengembangan *financial technology*. Kesimpulan dari penelitian ini adalah beberapa peran kaidah fikih dalam pengembangan *financial technology* terbagi menjadi tiga, yaitu: *pertama*, sebagai mekanisme preventif untuk menghindari kecurangan transaksi. *Kedua*, sebagai petunjuk moral (*ethical guideliness*) agar segala transaksi mengutamakan asas kejujuran dan kepatuhan terhadap prinsip-prinsip syariah. *Ketiga*, sebagai sarana sosialisasi fikih muamalah, khususnya dalam transaksi yang menggunakan instrumen *financial technology*.

Kata kunci: kaidah fikih; financial technology; literasi keuangan; bisnis online.

Introduction

The condition of global Islamic finance is changing with rapid advances in technology, and financial technology innovation (Fintech) emerged by combining e-finance, the Internet,

social networking services, social media, artificial intelligence (AI) and Big Data. not least in Indonesia. The existence of fintech has a positive impact by increasing process efficiency, cost-effectiveness, increasing distribution, Shariah compliance, and

financial inclusion.¹ Only those who are able respond to this new era will be able to survive.²

The development of fintech is developing rapidly, the transaction value of the fintech industry in Indonesia in 2017 reached the estimated US \$ 18.65 billion. Even according to Erns & Young's projections, various service products from fintech can attract 150 million customers by 2021.³ The presence of a number of fintech companies has also contributed to the development of MSMEs.⁴ Not only limited to helping venture capital financing, but also digital payment services and financial management. Although there are still negative aspects, such as: the existence of risk transfer for costs and the existence of a fixed interest system.⁵

Some other issues that have an impact on financial institutions, especially banks, are as follows: first, the release of data from the Indonesian Internet Service Providers Association shows that Internet User penetration in 2018 reached 171,176,716.8 million of the total population of Indonesia 264,161,600 people (BPS), based on these data the number of internet penetration reached 64.8 percent. Of the total population, there were 171, 17 million people connected to the internet network during 2018. Compared to the previous year, there was a growth of 27.9 million internet users in 2018.⁶ Second, the total millennial generation population,

which is 34% of the total population of Indonesia, lives in big cities.⁷ Third, the increasing number of middle economic classes in Indonesia.⁸

Furthermore, based on the national survey data of the Financial Services Authority (OJK) Indonesia (2016), Islamic financial literacy was only 8 percent or lower than conventional financial literacy of 30 percent. In addition, for the inclusion of new Islamic finance by 11 percent, lower than conventional financial inclusion of 68 percent, this is related to the condition where Indonesia is only in the ninth position in the Islamic finance market share in the world.⁹ This low level of literacy and inclusion in Islamic finance seems to be a paradox, considering that Indonesia is a country with the largest Muslim population in the world.¹⁰

In order to develop financial technology, to avoid elements that are contrary to Islam (*usury, gharar, maysir, tadlis, risywah, israf*, and other prohibited transactions), in-depth study of aspects of Islamic jurisprudence is needed.¹¹ In connection with this challenges, several strategies are recommended, namely: a) the existence of regulations by the authorities to realize benefit (*mashlahah*) in transactions using Fintech¹², b) increasing Human Resources capacity, c) enhancing collaborative efforts in business activities,¹³ and

¹ Miskam Surianom, "Fintech and Its Impact on Islamic Fund Management in Malaysia: A Legal Viewpoint," in *Emerging Issues in Islamic Finance Law and Practice in Malaysia*, ed. Yaacob Abdul Monir et al, (Emerald Publishing Limited, 2019), 223–46, <https://doi.org/10.1108/978-1-78973-545-120191019>.

² Ian Pollari, "The Rise of Fintech: Opportunities and Challenges," *JASSA The Finsia Journal of Applied Finance* 1, no. 3 (2016), pp. 15–21.

³ validnews.id, "Sinergi Dengan Fintech Jadi Solusi Dongkrak Keuangan Syariah," 2018, <https://www.validnews.id/Sinergi-dengan-Fintech-Jadi-Solusi-Dongkrak-Kuangan-Syariah-bSF>.

⁴ Irma Muzdalifa, Inayah Aulia Rahma, and Bella Gita Novalia, "PERAN FINTECH DALAM MENINGKATKAN KEUANGAN INKLUSIF PADA UMKM DI INDONESIA (PENDEKATAN KEUANGAN SYARIAH)," *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah* 3, no. 1 (2018), pp. 1–24.

⁵ Satria Utama and Inayatul Ilahiyah, "Pengembangan Model Low Cost Islamic Peer To Peer Financing Berbasis Financial Technology Untuk Akselerasi Kinerja UMKM," *Islamic Economics Journal* 4, no. 2 (2018), pp. 249–76.

⁶ Detik.com, "Pengguna Internet Indonesia Di Dominasi Milenial," 2019, <https://inet.detik.com/telecommunication/d-4551389/pengguna-internet-indonesia-didominasi-milenial>. Accessed, 12/9/2019.

⁷ Based on the release of the Boston Consulting Group (BCG) with the University of Berkley in 2011 in the United States, some of the characteristics of the millennial generation in America are as follows; First, the interest in reading conventional media is declining, with a smartphone. Second, ownership of social media accounts is a primary need as a communication tool and information center. Third, cellphones are an alternative source of media compared to television. Fourth, families as partners in their decision making, (Kementrian PPPA, 2018).

⁸ Taufik, *Rising Middle Class in Indonesia* (Jakarta: Gramedia Pustaka Utama, 2012), p.28

⁹ Thomson Reuters, "State of the Global Islamic Economy Report 2016/2017" (USA, 2016), p.10

¹⁰ Jeff Diamant, "The Countries with the 10 Largest Christian Populations and the 10 Largest Muslim Populations." Pew Research, 2019. <https://www.pewresearch.org/fact-tank/2019/04/01/the-countries-with-the-10-largest-christian-populations-and-the-10-largest-muslim-populations/>. Jeff Diamant. Accessed, 17/9/2019.

¹¹ Nuha Qonita, "POSITIONING ISLAMIC LEGAL THEORY IN THE DEVELOPMENT OF ISLAMIC FINANCE," *Jurisdictie: Jurnal Hukum Dan Syariah* 10, no. 1 (2019), pp. 18–32, <https://doi.org/10.18860/j.v10i1.7034>.

¹² Fajrina Eka Wulandari, "PEER TO PEER LENDING DALAM POJK, PBI DAN FATWA DSN MUI," *AHKAM* 6, no. 2 (2018): 241–66. See also: Anisah Novitarani & Ro'fah Setyowati. "ANALISIS CROWDFUNDING SYARIAH BERDASARKAN PRINSIP SYARIAH COMPLIANCE SERTA IMPLEMENTASINYA DALAM PRODUK PERBANKAN SYARIAH." *Manahij* 12, no. 2 (2018), pp. 247–162.

¹³ Muhamad Mujahidin, "Peluang Dan Tantangan Financial

d) improve security in transactions using financial technology.¹⁴ This study aims to conduct an in-depth analysis related to the role of Islamic jurisprudence in developing financial technology. Therefore, the research objectives become the focus of this study are divided into several chapters in the study, including: *first*, fintech: definition, history, and division. *Second*, fintech regulations in Indonesia: Bank Indonesia regulations, Financial Services Authority (OJK), and MUI Fatwa. *Third*, Islamic jurisprudence and financial technology: correlation analysis and implications. This research is qualitative-descriptive using the documentation method in data collection techniques. Some of the documents used in this study are in the form of main references on Islamic jurisprudence and Islamic rulings, several Regulations issued by Bank Indonesia and the Financial Authority (OJK) Indonesia as well as the Fatwa of the National Sharia Board-Indonesian Ulama Council (DSN-MUI). In addition, several journals and references related to Islamic jurisprudence, Islamic rulings, and financial technology are also used. Furthermore, content analysis techniques are used in data analysis, which focuses on research focus only on topics (content) that are relevant to the discussion.

Fintech: Definition, History and its Classification

Fintech is the application of digital technology to financial services.¹⁵ This service also provides new products and services to consumers, businesses and government that can disrupt the financial sector. According to Central Bank Indonesia regulations No. 19/12/PBI/2017, It defines as the use of technology in a financial system that produces new products, services, technology and/or business models and can have an impact on monetary stability, financial system stability, and/or the efficiency, smoothness, security, and reliability of payment systems.¹⁶ Leong

and Sung stated that¹⁷, fintech is an innovative idea that enhances financial service processes by proposing technological solutions according to different business situations, while those ideas can also lead to new business models or even new businesses. In another definition, fintech refer to as a general term for certain types of institutions, usually for startup companies that focus on providing software-based innovation in financial services¹⁸. In other languages it is also stated, fintech is a technology-based business that competes, activates and or collaborates with financial institutions. This is within the scope of creating software to processes that enable financial institutions to increase customer satisfaction and streamline the operational costs of the institution, or enable consumers to meet the needs of customers' financial facilities.¹⁹

The main idea of the development of FinTech is the development of the application of the concept of peer-to-peer (P2P) which was used by Napster in 1999 as music sharing instrument. Furthermore, the phenomenon of Fintech arises with the existence of Zopa, a financial institution in the UK, which ran money lending services in 2004. Then in 2008, the emergence of Bitcoin, an electronic currency, which is a new financial model through software.

Initially, fintech, which used the P2P financial concept, aimed to bridge the relationship between start-up activists and investors in business development efforts.²⁰ For example, some start-ups that are now popular in Indonesia are known as; (1) Go Jek, (2)Treveloka, (3) Grab, (4) Bukalapak, (5) Amarthia; (6) Cek Aja, (7) Bareksa, (8) Doku, (9) Go-Pay, (10) Midtrans, (11) Finansialku, (12) T-Cash, (13) Uang Teman, (14) Modalku and so forth.

Furthermore, in its development, the use of fintech is not only in the field of business start-

Technologi Syariah Di Indonesia,” 2019.

¹⁴ Much. Maftuhul Fahmi, “Inspirasi Qur’ani Dalam Pengembangan Fintech Syariah: Membaca Peluang, Tantangan, Dan Strategi Di Era Revolusi Industri 4.0”. Paper presentation Conference, p.14

¹⁵ Postnote, “Financial Technology (FinTech),” *Houses of Parliament*, 2016, p.2

¹⁶ Peraturan BANK INDONESIA Nomor 19/12/PBI/2017 Tentang Penyelenggaraan Teknologi Finansial (2017).

¹⁷ Leong, Kelvin, and Anna Sung, “FinTech (Financial Technology): What Is It and How to Use Technologies to Create Business Value in Fintech Way ?” *International Journal of Innovation, Management and Technology* 9, no. 2 (2018), pp. 74–78. <https://doi.org/10.18178/ijimt.2018.9.2.791>.

¹⁸ (Center for Latin American Monetary Studies, 2019)

¹⁹ Ian Pollari, “The Rise of Fintech: Opportunities and Challenges,” *JASSA The Finsia Journal of Applied Finance* 1, no. 3 (2016), pp. 15–21.

²⁰ Satria Utama & Inayatul Ilahiyah, “Pengembangan Model Low Cost Islamic Peer To Peer Financing Berbasis Financial Technology Untuk Akselerasi Kinerja UMKM.” *Islamic Economics Journal* 4, no. 2 (2018), pp. 249–76.

ups but developed into crowd-funding, where the community contributes to invest to participate in the business, and participate in social humanitarian movements. Among the popular crowdfunding services in Indonesia include; (1) www.kitabisa.com, (2) www.gandengtangan.org, (3) www.wujudkan.com.

However, fintech companies in Indonesia are dominated by several important sectors, namely: the payment sector by 42.22%, the lending sector by 17.78%, the aggregator sector by 12.59%, the financial planning sector by 8.15%, the sector crowdfunding by 8.15% and other fintech sectors by 11.11%.²¹

Financial Technology Regulations in Indonesia: Central Bank Indonesia Regulations, Financial Services Authority (OJK) Regulations, and Islamic Ruling of Shariah National Board - Indonesia Ulama Council

In Islam, all activities that have dimensions are permitted as long as it runs in accordance with Islamic sharia, namely activities carried out using sharia agreements, and also transaction activities are avoided from usury, *gharar*, *masyir*, *haram* and *tadlis* elements. In addition, transaction activities must follow OJK and BI regulations. This also applies to transactions using fintech.²²

In the study of Islamic jurisprudence, the main focus in a discussion is how to find propositions for law and establish laws with pre-existing propositions (*lithbâtu al-adillah li al-ahkâm wa thubûtu al-ahkâm bi al-adillah*)²³. In addition, an attempt to find the proposition must refer to the principles of Islamic rule (*qaidah fihiyyah*)²⁴ stating that the leader's policy in public affairs must be based on the consideration of the benefit.

(*tasharrufu al-imâm 'ala al-ra'iiyyati manûtan bi al-mashlahah*)²⁵, this rule is also quite relevant if it is associated with the phenomenon of financial technology that is being discussed frequently. In Indonesia, laws specifically related to the use of information technology for financial purposes are not yet available. However, the Financial Services Authority (OJK) Indonesia, as the operator of financial services, the Indonesian Ulama Council as the holder of the fatwa authority in Indonesia, and Central Bank Indonesia has issued regulations regarding online-based financing services.

As explained earlier, the practice of fintech in Indonesia is divided into several sectors such as the payment sector, the loan sector, the aggregator sector, and the financial planning sector. Of the four fintech models, the online-based payment sector ranks first (42.22%) followed by the lending sector (17.78%), aggregators (8.15%), fundraising (8.15%) and other fintech sectors at 11.11%.²⁶

Related to the development of Fintech transactions, the Indonesian Ulama Council (MUI) has set two new fatwas, namely: first, the MUI fatwa on Sharia Electronic Money (No.116/DSN-MUI/IX/2017). Second, the MUI fatwa on Information Technology-Based Financing Services Based on Sharia Principles (Fatwa No.117/DSN-MUI/IX/2018).

In Fatwa No. 117 concerning Information Technology-Based Financing Services Based on Sharia Principles, the organizers of business activities use fintech through the following types; (1) factoring financing, (2) financing procurement of ordered goods by third parties, (3) financing of procurement of goods for online businesses, (4) financing of procurement of goods through payment service providers (payment gateway), (5) and financing for employee.²⁷ However, there are several things in the fatwa above that need to be reviewed due to unclear material in question,

²¹ Irfan Nurfalah and Aam Slamet Rusydiana, "DIGITALISASI KEUANGAN SYARIAH MENUJU KEUANGAN INKLUSIF : KERANGKA MAQASHID SYARIAH" 11, no. 1 (2019), pp. 55–76, <https://doi.org/10.35313/ekspansi.v11i1.1205>.

²² Ahmad Safii & Andi Fariana, "Sinergi Fintech Dengan Perbankan Syariah Dalam Perspektif Hukum." *Istinbâth* 17, no. 2 (2018), pp. 417–30.

²³ Wahbah Zuhaili, *Ushûlu Al-Fiqhi Al-Islâmî* (Damaskus: Dâr al-Fikr, 2006), p. 27

²⁴ By definition, this rule explains that the policy of a leader (read: the government) to provide guidance to the community with consideration of benefits. Meanwhile, by analogy, this rule is equated with the responsibility of a guardian for orphans they care for

²⁵ Jalâluddin As-Shuyûthî, *Al-Ashbâh Wa Al-Nadhâir Fi Qawâ'id Wa Furû'i Fiqh Al-Shâfi'iyyah*. (Cairo: Dâr at-Tawfiq Li at-Turâth, 2009), pp.168-170

²⁶ Nurfalah and Rusydiana, "DIGITALISASI KEUANGAN SYARIAH MENUJU KEUANGAN INKLUSIF: KERANGKA MAQASHID SYARIAH." *Ekspansi: Jurnal Ekonomi, Keuangan, Perbankan dan Akuntansi*, Vol. 11, No. 1 (2019), pp. 55–76. <https://doi.org/10.35313/ekspansi.v11i1.1205>.

²⁷ Jadzil Baihaqi, "Financial Technology Peer-To-Peer Lending Berbasis Syariah Di Indonesia" 1, no. 2 (2018), pp. 116–32.

such as Co-Branding, Server Based or Chip Based, Registered and Unregistered.²⁸

In the fatwa above, more specifically explain a number of things about fintech such as: 1) general provisions; 2) legal provisions; 3) legal subjects; 4) provisions related to general guidelines on information technology-based financing services; 5) information technology-based financing service models; 6) provisions related to mechanism and contract covering a) financing of factoring; b) financing for the purchase of third party purchase orders; c) financing the procurement of goods for business people who sell online (online seller); d) financing the procurement of goods for businesses selling online with payment through the payment gateway provider; e) financing for employees; f) community-based financing. In addition, g) the fatwa also contains a dispute resolution and; h) closing provisions.

In the context of Financing through Information Technology-Based Financing Services Based on sharia principles, several contracts are used in accordance with Islamic sharia, including: *qardh*, *wakalah bil ujah*, *musyarakah*, dan *murabahah*.²⁹ In addition to the use of the above contract, the financial service provider also has an obligation to provide shariah compliance guarantees as well as protection for users of financial services.³⁰

Furthermore, two years earlier, the Financial Services Authority (OJK) had issued a Financial Services Authority Regulation No.77/ POJK.01/2016 concerning Technology-Based Money Lending and Borrowing Services. In this regulation, OJK defines information technology-based lending and borrowing services as the provision of financial services to bring together lenders and loan recipients in the context of a loan agreement to borrow in rupiah directly through an electronic system using the internet network.³¹

²⁸ Sahal Muzaki, "ANALISIS FATWA MUI NO. 116/DSN-MUI/IX/2017 DAN PBI NO. 20/6/PBI/2018 TENTANG UANG ELEKTRONIK SYARIAH DITINJAU DARI PERSPEKTIF MAQASID ASY-SYARI'AH." (Theses, UIN Syarif Hidayatullah, 2018), p.ii

²⁹ Oni Sahroni, "LAYANAN PEMBIAYAAN BERBASIS TEKNOLOGI INFORMASI BERDASARKAN PRINSIP SYARIAH," 2018.

³⁰ Achmad Basori Alwi, "Pembiayaan Berbasis Teknologi Informasi (Fintech) Yang Berdasarkan Syariah," *Al-Qānūn* 21, no. 2 (2018), pp. 256–71.

³¹ Otoritas Jasa Keuangan, "Peraturan Otoritas Jasa Keuangan Nomor 77/PJOK.01/2016 Tentang Layanan Pinjam Meminjam Uang Berbasis Teknologi Informasi" (2016).

Whereas Central Bank Indonesia issued Bank Indonesia Regulation number 19/12/PBI/2017 concerning the implementation of Financial Technology. In contrast to OJK regulations which emphasize technology-based borrowing and borrowing services or Fatwa of National Shariah Board-Indonesian Ulema Council (DSN-MUI) that emphasize online financing, Central Bank Indonesia's regulations are more targeted at efforts to regulate the implementation of financial technology to encourage innovation in finance by applying the principles of consumer protection and risk management and prudence in order to maintain monetary stability, financial system stability and payment systems that are efficient, smooth, safe and reliable.³²

In addition, Central Bank Indonesia also issued a categorization of the implementation of financial technology in a) the payment system; b) market supporters; c) investment management and risk management; d) loans, financing and capital supply; and e) other financial services. While the financial technology criteria set by BI include financial technology that: a) is innovative; b) can have an impact on existing financial products, services, technology and / or business models; c) can provide benefits to the community; d) can be widely used; and d) other criteria set by Bank Indonesia.³³

Islamic Rulings and Financial Technology: Analysis on the Relevance and Implications

In Islam, all activities in all dimensions of human life go to the objectives of sharia (*maqashid syariah*), which is to achieve benefit (*maslahah*) by safeguarding five important basic aspects of life, namely; guarding religion, soul, reason, descent and wealth. Some of the roles of Islamic jurisprudence in developing financial technology divided into three key aspect: *first*, as a preventive mechanism to avoid fraud transaction. *Second*, as a moral guide (ethical guidelines) to maintain that all transactions prioritize the principles of honesty and compliance with sharia principles. *Third*, as a means of socializing Islamic rulings

³² Bank Indonesia, "Peraturan Bank Indonesia Nomor 19/12/PBI/2017 Tentang Penyelenggaraan Teknologi Finansial" (2017).

³³ Bank Indonesia, "Peraturan Bank Indonesia..., (2017)

(*muamalah fiqh*), especially in transactions that use financial technology instruments.

The following are some rules that can be used in developing fintech in Indonesia;

1. The rules hardship begets facility (*Al-Masyaqqah Tajlibu al-Taysir*)

Besides the use of rules “the leader’s policy on the affairs of his people must be based on benefits” (*tasarrafu al-imâm ‘ala al-ra’iyyati manûthan bi al-mashlahah*), there are a some rules that can be used as a basis for strengthening the legal implementation of *fintech* In Indonesia. In his fatwa, Indonesian Ulema Council use rules “basically, any form of social activity is permitted unless there is an argument forbidding it” (*al-ashlu fi al-mu’âmalat al-ibâhah illa an yadulla dalîlun ‘ala tahrîmihâ*), “Harm must be eliminated” (*al-dararu yuzâlu*), “Harm is eliminated to the extent that is possible” (*al-Dhararu yudfa’u bi qadri al-imkân*), “Custom is a source of judicial decisions” (*al-‘âdah muhakkamah*), “the determination of a law depends on whether or not there is a connection” (*al-hukmu yadûru ma’a al-i’llati wujûdan wa ‘adaman*), and rules “where there is a benefit, there is God’s law (*aynamâ wujudat al-mashlahah fa thamma wajhullahi*)³⁴.

In addition to the *fiqhiyah* rules attached to the MUI fatwa there are a number of additional shariah rules that can be used to protect the behavior of consumers or customers as well as providers of information technology-based financial services. Call it the rules “hardship begets facility” (*al-mashaqqah tajlibu al-taysir*). Al-Sadlân explained that literally, this rule means hardship begets facility. While terminologically, this rule is defined as a law that arises from the disability of the implementation due to difficulties originating from the individual or what he has so that the relationship relates a person from the act of complicating it.³⁵

In this context, The Financial Services Authority stated that the difficulties experienced

by customers from conventional financial services are the strict banking rules and the limited banking industry in serving the community in certain regions. Meanwhile, the public needs some kind of alternative funding services besides traditional financial industry services with the aim of getting financing alternatives that are more democratic, transparent and reach the wider community as well as cost-efficient finance.³⁶

Table 1: Risks in the Financial Services Authority version of the Fintech Industry

No	Rule	Issue	Risk
1	Consumer protection	Protection of customer funds	Potential loss or decline in financial capacity both due to misuse, fraud and force majeure from fintech activities
2		User data protection	The privacy issues of fintech users are prone to intentional or unintentional misuse of data (<i>hacker attacks, malware and so on</i>)
3	National Interest	Anti-Money Laundering and prevention of terrorism funding	The ease and speed offered by fintech raises the potential for misuse of money laundering and terrorism financing activities
4		Financial system stability	An adequate risk management is needed so that it does not negatively impact financial system stability

Source: Muliaman D. Hadad (2017)

Meanwhile a study entitled the role of fintech in enhancing financial inclusion at MSMEs in Indonesia (Sharia financial approach) revealed a number of advantages and disadvantages of fintech. One of the advantages that fintech is trying to do is ease of capital lending, easy and safe digital payment services for business people, and financial management services.³⁷ While the shortcomings and weaknesses of the implementation of fintech

³⁴ Dewan Syariah Nasional-Majelis Ulama Indonesia (DSN-MUI), Fatwa DSN-MUI No 117/DSN-MUI/II/2018 tentang Layanan Pembiayaan Berbasis Teknologi Informasi Berdasarkan Prinsip Syari’ah (2018), p.4

³⁵ Shalih bin Ghânim al-Sadlân, *Al-Qawâ'id Al-Fiqhiyyah Al-Kubrâ Wa Mâ Yatafarra'u 'Anhâ*, (Riyadh: Dâr Balansiyyah, 1999), p.220

³⁶ Muliaman D. Hadad, “Financial Technology (Fintech) Di Indonesia.” Jakarta, 2017.

³⁷ Irma, et, al., “PERAN FINTECH DALAM MENINGKATKAN KEUANGAN INKLUSIF PADA UMKM DI INDONESIA (PENDEKATAN KEUANGAN SYARIAH).” *Jurnal Masharif Al-Syariah: Jurnal Ekonomi Dan Perbankan Syariah* 3, no. 1 (2018), pp. 17-22.

for MSMEs businesses are infrastructure, human resources, legislation, and the lack of financial literacy for MSMEs entrepreneurs.

Table 2: Risks of the Implementation of fintech in the MSMEs Sector

No	Issue	Risk
1	Cyber Security (Application of Cybercrime)	The development of such a sophisticated cyber allows cybercriminals to track financial transactions and break into customer funds online
2	Non-Performing Loan Ratio	Financial Services Authority (OJK) noted that the ratio of bad loans to fintech companies was recorded at around 1.28% in January 2018 or increased significantly compared to December 2017 which only stood at 0.99%. If loans disbursed through fintech reach IDR. 3 trillion, non-performing loans caused by fintech have risen by 5.4% or from around IDR. 2.5 billion to around IDR. 2.8 billion.

Source: Irma, et, al., (2018)

A number of risks arising from the application of fintech lead to the unpreparedness of the government in regulating or making laws and regulations that specifically discuss fintech. Therefore, the government, in this case, the executive and legislative power holders need to work together in making laws that function as ‘guardians’ of customers and ‘protectors’ of financial service providers. Moreover, the development of fintech for payment services or financial lending and borrowing services is developing very rapidly.

2. Rule “Necessity justifies that which may be unlawful” (Al-Dhararu Yuzâlu)

Although not explicitly used, the use of this rules in the application of fintech in Indonesia continues to be increased by a number of related institutions in Indonesia.

This rule is derived from the words of the

Prophet Muhammad: (لا ضرر ولا ضرار) which is understood as a call not to endanger his brother with something while not letting them feel the difficulty by forgiving and clearing it (of the trouble).³⁸ If it is related to fintech problems in Indonesia, then the imposition of sanctions to reduce the slightest possible error causing the difficulty to dangerous levels needs to be enforced.

To anticipate this risk, the government requires sanctions as an effort to control the mistakes and risks of every financial service, including the Indonesian Ulema Council which applies dispute resolution in the fatwa related to information technology-based financing services based on sharia principles. In fatwa stated that, “*Settling disputes between parties can be done through consensus agreement. If consensus agreement is not reached, the dispute resolution is carried out through a syariah-based dispute resolution institution in accordance with the applicable laws and regulations*”.³⁹

In addition to efforts to resolve disputes by prioritizing consensus agreement as an effort to resolve the first phase, the Indonesian Ulema Council has issued a fatwa on capable customers that delay payments. Fatwa of the National Sharia Council of the Indonesian Ulema Council No. 17/DSN-MUI/IX/2000 which gives authority or at least provides a moral injection for the managers of financial services in implementing sanctions for able customers with applicable terms and conditions.⁴⁰

³⁸ Abî ‘Abdi al-Rahmân Al-Jazâirî, *Al-Qawâ'id Al-Fiqhiyyah Al-Mustakhrijah Min Kitâbi l'lâmu Al-Muwaqqi'în Li Ibnu Qayyim Al-Jawziyah* (Riyadh: Dâru ibnu ‘Affan, n.d.).

³⁹ Dewan Syariah Nasional-Majelis Ulama Indonesia (DSN-MUI), *Fatwa DSN-MUI No 117/DSN-MUI/II/2018 tentang Layanan Pembiayaan Berbasis Teknologi Informasi Berdasarkan Prinsip Syari'ah* (2018).

⁴⁰ In the Fatwa National Sharia Council - Indonesian Ulema Council No. 17/DSN-MUI/IX/2000 regarding Sanctions for capable customers who delay payment, the following actions can be taken: *first*, sanctions referred to in this fatwa are sanctions imposed by Islamic financial institutions on customers who are able to pay but delay payments on purpose; *second*, customers who have not been able to pay due to force majeure may not be subject to sanctions; *third*, capable customers who delay payments or do not have the will and good faith to pay their debts, may be subject to sanctions; *fourth*, sanctions are based on the *ta'zîr* principle, which aims to make customers more disciplined in carrying out their obligations; *fifth*, sanctions can be in the form of a

On the other hand, Central Bank Indonesia as the financial regulator attaches a number of sanctions beginning with a written warning to Article 20 paragraphs (1), (2) and (3), termination of business activities, certain actions related to the operation of payment system activities, and/or recommendations to the competent authority to revoke the business license granted by the competent authority in question, the deletion from the list of financial technology providers at Bank Indonesia, the temporary suspension of part or all of the payment system service activities until the revocation of the license as the payment system service provider.⁴¹

Table 3: Sanctions for Financial Technology Providers Who Break Rules according to Bank Indonesia, the Financial Services Authority and Bank Indonesia

No	Institution	Rules	Type of Sanctions
1	National Sharia Board-Indonesian Ulama Council (DSN-MUI)	Fatwa DSN-MUI No. 117/DSN-MUI/II/2018 regarding sharia-based information technology-based financing services	the consensus before it is settled through a dispute resolution institution based on sharia according to statutory regulations.
2	National Sharia Board-Indonesian Ulama Council (DSN-MUI)	Fatwa DSN-MUI No. 17/DSN-MUI/IX/2000 regarding sanctions for customers who delay payment	The consensus before being submitted to the Sharia Arbitration Board
3	Financial Services Authority (OJK)	Financial Services Authority (OJK) Regulation No.77/PJOK.01/2016 Regarding the Information Technology-based Lending and Borrowing Services Article 47 paragraph (1), (2) dan (3).	Written warning, monetary fines, restrictions on business activities, revocation of licenses

fine of an amount of money determined on the basis of an agreement and made when the contract is signed; and sixth, funds originating from fines are designated as social funds. Furthermore, if one party does not fulfill its obligations or if there is a dispute between two parties, then the settlement is carried out through the Islamic Arbitration. See: Dewan Syariah Nasional-Majelis Ulama Indonesia, *Himpunan Fatwa Keuangan Syariah* (Jakarta: Erlangga, 2014). pp. 120-124

⁴¹ Bank Indonesia, Peraturan Bank Indonesia Nomor 19/12/PBI/2017 tentang Penyelenggaraan Teknologi Finansial.

4	Central Bank of Indonesia	Bank Indonesia Regulation No. 18/40 / PBI / 2016 regarding the implementation of payment transaction processing	Strikes, fines, temporary suspension of part or all of the activities, revocation of licenses as a payment system service provider
5		Bank Indonesia Regulation No. 19/12/ PBI/2017 regarding the implementation of financial technology Article 20 paragraph 20 ayat (1), (2) dan (3)	Written warning; suspension of business activities, certain actions related to the implementation of payment system activities; and/or recommendations to the competent authority to revoke the business license granted by the competent authority concerned; deletion from the list of Financial technology providers at Bank Indonesia, and revocation of licenses as payment system service providers

Source: National Sharia Board-Indonesian Ulama Council, the Regulation Financial Services Authority (OJK), and the Regulation of Bank Indonesia.

3. Rule “harm must be eliminated” (*Dar’u Al-Mafâsid Muqaddamun ‘Ala Jalbi Al-Mashâlih*)

After discussing the strengths, weaknesses and efforts to minimize risk through sanctions instruments, the community needs to obtain guidance and input on how to use fintech wisely by considering the benefits and damage that might occur.

‘Izzuddin ‘Abdussalâm stated that consideration of benefit and damage in an affair was an important matter. For him, the principle of prudence (*al-ihthiyâth*) contained in a matter is needed to ensure that something has certainty whether it is mandatory or unlawful to be used.⁴²

Therefore also, Al-Zarqâ explained that the above rules are intended to determine one’s position when finding the benefits and damage in a matter.⁴³ Through this rules, al-Zarqâ and

⁴² Izzuddin ‘Abdissalâm, *Qawâ'id Al-Kubrâ Al-Mawsûm Bi Qawâ'id Al-Ahkâm Fi Ishlâhi Al-Anâm* (Damascus: Dâr al-Qalam, 2000), pp. 25-26

⁴³ Ahmad bin Muhammad Al-Zarqâ, *Sharhu Al-Qawâ'id Al-Fiqhiyyah* (Damascus: Dâr al-Qalam, 1989), p.205

'Izzuddin lead to the denial of damage first rather than taking the benefits that can be taken. Both agreed that to eliminate the danger, the damage must take precedence over the benefit aspect first. In fact, 'Abdul 'Aziz Muhammad 'Azzam mentions that the prohibition commandment said by Allah is harder than the command to carry out the command of Allah.⁴⁴ In the context of financial technology, the above rules become a reference for service users in online-based transactions so that they can always weigh the weight of benefits and badness in conducting online-based transactions, if the transactions to be carried out are doubtful and will result in deterioration, then the transaction must be avoided. In order to avoid the consequences of bad things in the future.

This is also in harmony with the rules that read, "Contracts are to be understood in relation to their intention and substance, not by the words and phrases used" (*al-'Ibâratu fi al-'Uqûd Li al-Maqâsid wa al-Ma'âni La Li al-alfâdz wa al-Mabânî*). Based on this rule, it is clear between the benefits and badness obtained in financial technology transactions, the more important is the role of ethics in doing business, both for financial technology service providers and users.

Therefore, as stated by al-Ghazâlî, the main thing that needs to be done in business is motivation or intention. If the planned intention is correct, all transaction activities will be carried out in a good and correct manner as a mandate that must be properly accounted for.⁴⁵ Therefore, business ethics is strongly emphasized in Islam, because for those who are honest one day they will be given a noble place with the prophets, martyrs and the right people.⁴⁶

Conclusion

This study aims to conduct an in-depth analysis related to the role of Islamic rulings in developing financial technology. The conclusion

of this research is that all activities in Islam make all dimensions of human life focused on the goal of sharia (*maqashid sharia*), which is achieving *maslahah* by maintaining five important basic aspects of life, namely; safeguarding of religion, soul, reason, descent and wealth.

Some of the roles of Islamic rulings in developing financial technology divided into three key aspect: *first*, as a preventive mechanism to avoid fraud transaction. *Second*, as a moral guide (ethical guidelines) to maintain that all transactions prioritize the principles of honesty and compliance with sharia principles. *Third*, as a means of socializing Islamic rulings, especially in transactions that use financial technology instruments.

Among some of the rules that can be used as a foundation for the creation of financial technology activities that are in harmony with the objectives of sharia are as follows, namely; *first*, the rules "hardship begets facility" (*al-mashaqqah tajlibu al-taysir*). *Second*, "harm must be eliminated" (*al-dararu yuzâlu*). *Third*, the rules "avoiding badness takes precedence over taking an advantage" (*Dar'u Al-Mafâsid Muqaddamun 'Ala Jalbi Al-Mashâlih*).

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⁴⁶ Rahmad Hakim, "Islamic Economists in The Early 21 St Century View's on Business Ethics," *Falah: Jurnal Ekonomi Syariah* 1, no. 1 (2016), pp. 1–14.

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