



STUDY OF LITERATURE FINANCIAL TECHNOLOGY, BLOCKCHAIN AND ISLAMIC FINANCE

M. Erwin SP¹, Dwi Kresna Riady², M. Shabri Abd. Majid³, Marliyah⁴, Rita Handayani⁵

^{1,2}EHMRI Institute

³Fakultas Ekonomi dan Bisnis, Universitas Syiah Kuala

^{4,5}Fakultas Ekonomi dan Bisnis Islam, UIN Sumatera Utara

E-mail: ¹⁾ muhammaderwin932@gmail.com , ²⁾ dwikresnariyadi@gmail.com

FinTech is a new term in the financial industry and its aim is to improve financial services through the use of technology.” Financial technology is one of the most widely used terms for research in the financial industry today. The future of Islamic finance especially Islamic FinTech is very good in Muslim countries. The development of mobile and smartphones has paved the way for FinTech growth in these countries. These opportunities are certainly not without challenges. The biggest challenge for Islamic FinTech companies is about regulation and the lack of good and authentic research in the Sharia Fintech sector. Islamic FinTech needs to keep pace with the rapid developments that occur in the conventional financial world, Islamic FinTech must maintain stability and must protect investors and institutions from fraudulent trading practices.

Keywords: *Blockchain, Cryptocurrency, Bitcoin*

1. INTRODUCTION

FinTech as a term appeared in 1972 by Abraham Leo Bettinger by saying "FinTech can be defined as a contraction that combines the experience and expertise of banks with information technology" (Bettinger, 1972). Schueffel (2017) says "FinTech is a new term in the financial industry and its aim is to improve financial services through the use of technology." Financial technology is one of the most widely used terms for research in the financial industry today. Financial Technology (FinTech) is the use of modern innovative technology in finance. It is basically the use of innovative and sophisticated technology to provide financial services. Fintech as a concept reached its peak in the late 2010s (Haddad, 2018). Fintech fulfills the need for more security for investors by providing innovative and secure financial services. Another reason for the emergence of Fintech can be related to the need for more affordable financial services that provide faster mobility and speed (Anikina et al., 2016). The main reason for the emergence of FinTech was the global financial crisis of 2008 (Haddad, 2018). The Global Financial Crisis is a period in which people lose faith in the financial system and look for something that gives them more certainty when it comes to their investments. The severity of the financial crisis in 2008 has paved the way for the Islamic Finance system to emerge as a vehicle for recovery from the financial crisis (Hussain, 2010).

These innovations change people's lives and they connect ordinary people with genuine, infrastructural effects (Schindle, 2017). Islamic FinTech (Financial technology) is a Fintech that caters to the needs of Islamic financial institutions and is designed to meet the principles laid down by sharia. This paper aims to review the academic research work carried out in the field of Islamic financial technology. The Islamic FinTech area has been classified into three broad categories of Islamic FinTech, Islamic Finance technology opportunities and challenges, Cryptocurrency/Blockchain sharia compliance and law/regulation.

It is estimated that global cumulative investment in FinTech will exceed \$1.5 billion in the next 3-5 years (PWC, 2019). Banks and financial institutions around the world are facing the most difficult times due to lack of innovation in the banking and finance industry.

1.1 Types of financial technology (Fintech)

According to Siregar (2016), Fintech (Financial technology) can be divided into several categories:

1. Payment channel/system, namely a payment system or payment system. Electronic services using credit cards, cryptocurrencies or it could be a cryptographic-based payment system (blockchain), for example Bitcoin has been widely used by the global community. This system is used to replace currency and serves as a payment deposit as a means of payment.
2. Digital banking, is a system used by banks to provide services using digital/online technology to meet customer needs. Examples of digital banking services can be in the form of SMS banking, internet banking, phone banking, mobile banking, video banking, and the most widely known to the public as ATMs, and EDCs. In addition, several banks have launched Officeless Financial Services within the financial inclusion framework (Laku Pandai), which is a remote banking service in line with OJK policies. The most important target is for everyone who does not have access to a bank.
3. Online/digital insurance, this service is used by insurance companies where customers can take advantage of this digital technology. For example, an electronic portal used by some insurance companies to promote their insurance products, issue policies, and also receive customer claims reports. In addition, most insurance companies use websites or mobile applications to provide premium comparison services (digital consultants) as well as agents (digital marketers).
4. Peer-to-peer (P2P) lending is a financial service system that positions itself as a marketplace to bring together borrowers and lenders using digital technology, where most of these services all use websites.
5. Crowdfunding is a capital-raising system using a website or other digital technology for investment or social purposes.

1.2 Differences in Sharia Fintech and Conventional Fintech

The difference between Conventional Fintech and Sharia Fintech is basically. Conventional Fintech uses a benefit system while Sharia Fintech uses Islamic law. In carrying out its business activities, conventional and sharia-based fintech must comply with regulations issued by OJK No. 77/POJK.01/2016 December 26, 2016 regarding information technology-based credit services, but specifically for Sharia Fintech there are additions other than referring to existing regulations. issued by OJK, also refers to the Fatwa of the National Sharia Council of the Indonesian Ulema Council (DSN-MUI) No: 117/DSNMUI/II/2018 regarding the Sharia Information Technology-Based Funding Service Guidelines for the Indonesian Ulema Council (DSN-MUI).

1.3 Types of Contracts in Sharia Fintech

Chairman of the Indonesian Sharia Fintech Association (AFSI) Ronald Yusuf Wijaya in Evandio (2020) stated that transactions between lenders and borrowers are cooperatives, meaning that sharia fintech does not charge interest but benefits the sharing system with different content that has been previously agreed upon.

According to Ronald, there are six types of contracts allowed in Sharia Fintech, namely:

1. Al ba'i (buying and selling), namely buying and selling contract in which there is an exchange of goods and services between traders and consumers demanding the transfer of property rights.
2. Ijarah is a contract made by offering wages or salaries for goods or services that have been transferred to/benefits.
3. Mudharabah is a partnership agreement between the owner of capital and the manager of capital on the condition that the company's profits are divided according to the agreed ratio. Meanwhile, if there is a loss, it is borne by the owner of the capital.



4. Musyarakah, is a partnership agreement between two or more groups in establishing/opening a certain business in which all parties share in the form of venture capital. In the concept of a Musyarakah contract, it is stated that if the business/business makes a profit, then the profit will be divided according to the agreed amount, and if there is a loss, it will be borne by all departments. comparable.
5. Wakalah bi al ujah is a contract that gives authority to a person or business entity to carry out certain legal activities in exchange for ujah (salary).
6. Qardh is a loan agreement (a loan made by a lender) which stipulates that the borrower is obliged to return the money he has received in accordance with the time and method previously agreed upon.

1.4 Literature Review

The future of Islamic finance especially Islamic FinTech is very good in Muslim countries. The development of mobile and smartphones has paved the way for FinTech growth in these countries. These opportunities are certainly not without challenges. The biggest challenge for Sharia FinTech companies is about regulation and the lack of good and authentic research in the Sharia Fintech sector (Brian, 2017; Firmansyah and Anwar, 2019). Another study (Firmansyah and Ramdani, 2018) argues that the presence of Islamic Fintech companies can help start-ups effectively. This will be a good boost for young graduates due to the lack of supporting organizations with sharia compliance financing.

Fintech has doubled in the European region, in fact, at a rate double that of Silicon Valley since 2008. Since 2011, the volume of FinTech transactions in the London region has tripled and accounted for more than 50% of all European activity (Skan, 2014). There is room for new financial technology companies, and that can be achieved through a variety of financial services and respect from clients. It is very important for the development of financial services companies and banks because the development and growth of FinTech companies will give customers the choice to use traditional financial services as well as new and innovative services provided through FinTech companies (Gomber, 2018; 2017; Saksonova and Merlino, 2017). FinTech companies have given traditional banks a lifeline to go digital and provide low-cost financial services. In a country like the Czech Republic, low-cost banking with Fintech will help banks to compete with larger and more established banks (Hes and Jilkova, 2016).

Islamic FinTech is based on Shariah ethos and values and has the ability to lead the world of finance around the world. The biggest advantage with Sharia Fintech is that it is transparent, accessible, and easy to use (Laldin, 2018).

1.4.1 Some Adopted Technology Research in Islamic Economics and Finance

Table 1. Some Adopted Technology Research in Islamic Economics and Finance

No.	Writer's name	Year	
1	Fouad H. Beseiso	2014	Central Banks' Role in Shaping the Future of Islamic Banking. The development of Islamic banking requires a joint role across institutions: the central bank, public policy, international and multilateral institutions, as well as Islamic banking itself. The role of the Central Bank as a regulatory and supervisory body in shaping the future of the system.
2	Jan A. Bergstra	2015	Bitcoin and Islamic Finance Maududi, Silvio Gesell, and Satoshi Nakamoto are some of the names that can be considered as central figures in the development of unconventional financial systems and methodologies. Maududi with Islamic finance. Gessel with the idea of free currency. And Nakamoto with Bitcoin. Although there are

			some points of difference between them, this paper asserts that Bitcoin is an effective instrument for the further development of Islamic finance with arguments built on 4 key elements.
3	Nabilah Rozzani, Intan Salwani Mohamed and Sharifah Norzehan Syed Yusuf		Technology for Islamic microfinance's disbursement and repayment system Exploration of the implementation of a mobile network system in Islamic microfinance institutions, in collaboration with commercial banks in Malaysia. Also, problems that arise regarding the application of technology in payment systems and repayments in Islamic microfinance institutions from the client's perspective.
4	Zulkhibri	2016	Financial inclusion, financial inclusion policy and Islamic finance Investigation of effective poverty alleviation strategies through financial inclusion policies. Islamic finance can participate in building a financial system that is financially and socially inclusive and sustainable. Adoption of new technology is one of the important factors that can help lower barriers, while increasing financial inclusion.

When viewed from the point of view of the sharia mechanism, modern money circulation refers to the main prohibitions of sharia which are focused on interest (riba), uncertainty (gharar), risk and excessive speculation (maysir) which focuses on the following seven aspects;

- a. Money commodity features
- b. Emission volume and money supply
- c. Procedure for issuing money
- d. Banking liquidity management
- e. Inflation
- f. The problem of paying zakat
- g. Avoiding sharia prohibitions

From the seven aspects above, some Muslim scholars argue about efficiency (illah) regarding the essence and role of money. From Imam Al-Ghazali; “Allah created the dinar and dirham to be circulated and to be a fair and equitable standard between the different assets and for the wisdom of others making them the means for all other assets. That's because they are valuable in themselves (intrinsic value) but undesirable in their own right. Likewise with Ibn Taimiyah, he said; “Whenever currencies are sold to each other on different grounds, it is against the purpose of the Thamaniyyah (measure of value) of money” and in his writings Sheikh Saleh Al-Fauzan wrote; Believing that any “measure of value” that is generally accepted by people should be regarded as the currency in which Riba rules apply.

In running sharia fintech, there are opportunities as well as challenges that must be faced. The opportunities are; Islamic Fintech companies can help massive new startups, Islamic FinTech companies can provide a variety of innovative products and services, giving customers the choice to use traditional financial services as well as new and innovative services, It can provide cost-effective solutions for financial services and will provide a lifeline for traditional Islamic banks to go digital and provide low-cost financial services, Sharia Fintech is transparent, accessible, easy to use and can easily gain customer trust, can be linked to cryptocurrencies.

However, apart from the positive things offered, Islamic fintech has challenges that cannot be considered low risk. Sharia fintech has challenges to; Lack of good and authentic research in Islamic Fintech sector, Lack of development and trained human resources and clear policies from government, Intuition education must bring good research and provide trained personnel and academic researchers must provide good research, Islamic FinTech needs to keep pace with



developments rapidly happening in the conventional financial world, Islamic FinTech must maintain stability and must protect investors and institutions from fraudulent trading practices, Banks are exposed at every level because technology brings more transparency.

1.4.2 Blockchain and Cryptocurrencies

Blockchain is a technology that is used as a digital data storage system that is connected through cryptography. The use of blockchain technology cannot be separated from Bitcoin and Cryptocurrency, although there are many sectors that can take advantage of this technology.

Blockchain technology has now been used by various sectors, one of which is for crypto currency transactions such as bitcoin. Blockchain is a technology used by many cryptocurrencies for secure transactions in assets and data, one of the cryptocurrencies that uses this technology is Bitcoin. Blockchain has a transparent mechanism, whereas Bitcoin operates anonymously. According to some cryptocurrency experts are defined as follows;

- a. According to Rosiah (2020) cryptocurrency is an internet-based medium of exchange that uses cryptographic functions to carry out financial transactions.
- b. According to Yoo et al (2020) cryptocurrency is a worldwide digital payment system that performs its functions online.

The word "crypto" in cryptocurrency refers to encryption or cryptography created by the instrument and then added to the blockchain database while "currency" here refers to recognition as a medium of exchange among its users (Abu Bakar, 2017).

2. IMPLEMENTATION METHOD

This research is a type of qualitative-descriptive research with a literature study approach. The literature study was carried out by collecting journal articles that were in accordance with the research objectives using the Publish or Perish (PoP) application, then content analysis was carried out. Content analysis is an analytical method by trying to find out the content and intent of a text to produce an objective description. The data needed in research can be obtained from library sources or documents sourced from journal articles that are adapted to the research theme. Content analysis is research that is in-depth discussion of the contents of a written or printed information to make inferences that can be imitated and valid data by taking into account the context.

The content analysis technique is carried out through 3 main stages. First, by means of data reduction, where the data obtained from journal articles are reduced, summarized and selected important points, then the suitability of the research objectives to be studied is seen to make it easier to understand. Second, by displaying the data, that is, presenting the information obtained as a result of data reduction, which allows data to be drawn in accordance with the intended research. Third, by drawing conclusions where the researcher looks for the meaning of the data collected and then draws more basic conclusions in accordance with the intended research.

3. RESULTS AND DISCUSSION

From the author's search using the Publish or Perish (PoP) application from the last 5 years (2017-2021), with articles on Fintech, Blockchain and Islamic Financial with the keywords "Fintech, Blockchain and Cryptocurrency", up to 37 articles were found. But after being reviewed and understood, only 7 articles that are appropriate and relevant to this paper can be used. Here are the details of the article in question:

Table 2. Articles that match the writing, the theme of Fintech, Blockchain and Islamic Finance

No.	Writer	Title	Year	Finding Points
1	Cut Niswatul Chaira, Hafas Furqani, Dara Amanatillah	Concept of Currency in Islamic Economy (Bitcoin Analysis as a Virtual Currency)	2019	<ul style="list-style-type: none"> • Money Concept; Understanding money in general is objects that are approved by the community as an intermediary tool for conducting exchanges or trade. What is meant by "approved" in this definition is

				<p>that there is an agreement among members of the community to use one or several objects as an intermediary tool in exchange activities.</p> <ul style="list-style-type: none"> • Bitcoin or abbreviated as “BTC” is a digital currency, which is not issued by institutions, organizations or governments in its regulation. Bitcoin utilizes a peer-to-peer network as a distribution medium using advanced cryptographic protocols (Mulyanto & Mulia, 2014).
2	Juli Meliza, Isfenti Sadalia	CRYPTOCURRENCY	2021	<ul style="list-style-type: none"> • The analysis carried out revealed several important points, namely, related to cryptocurrencies from an economic point of view; the opportunities and risks of cryptocurrency, then identify and extract research problems, in order to set the agenda for future research efforts. • The value of cryptocurrency is not an independent standard value, it takes the value of fiat currency to determine the value of cryptocurrency, cryptocurrency can still be used as a medium of exchange, referring to Adam (Adam, 2017). • Regarding the legal tender, the government makes something as a legal tender and must be issued by the central authority (Nair & Motwani, 2018). • Cryptocurrency is usually synonymous with negative publicity related to illegal use, related to the discovery of cryptocurrency users exploiting features for illegal purposes. • The Silk Road is one of those crypto communities, which is generally labeled as a hotbed of dealers (Christin, 2013). The Silk Road brought together those who resisted scrutiny, whether driven by personal trust, financial gain, mundane need or simple curiosity, its users forming a space where state-based regulatory boundaries were rejected.
3	Mustafa Raza Rabbani, Shahnawaz Khan, Eleftherios I. Thalassinos	FinTech, Blockchain and Islamic Finance: An Extensive Literature Review	2020	<ul style="list-style-type: none"> • Islamic FinTech has Opportunities and Challenges The future of Islamic finance especially Islamic FinTech is very good in Muslim countries. The development of mobile phones and smartphones has paved the way for FinTech growth in these countries. Of course, this opportunity is not without challenges. The biggest challenges for Islamic FinTech companies are about regulation and the lack of good and authentic research in the Sharia Fintech sector (Brian, 2017; Firmansyah and Anwar, 2019).



				<ul style="list-style-type: none"> • Another study (Firmansyah and Ramdani, 2018) suggests that the presence of Sharia Fintech companies can help startups effectively. This will be a good encouragement for young graduates in sharia compliance management.
4	Siti Nabihah Esrati, Shifa Mohd Nor, Mariani Abdul Majid	Fintech (Blockchain) And Zakat Management In Malaysia/ Financial Technology And Zakah Management In Malaysia	2018	<ul style="list-style-type: none"> • Blockchain is one of the fintech innovations that has the potential to offer various benefits to the community. Blockchain is basically a database record, or record book for all business transactions or digital events that have been carried out and shared among participants. Every transaction in lejar will be approved by the agreement of the majority of participants in the system. As soon as the information data is entered, the information will not be extinguished. Blockchain contains a specific record for every transaction that has been made (Micheal et al., 2016).
5	Ahamad Rifa'i, Mulono Apriyanto, Widyawati	The Impact of Cryptocurrencies on the Community Economy	2021	<ul style="list-style-type: none"> • Cryptocurrency is the name given to a system that uses cryptography. The word "cryptocurrency" comes from a combination of 2 words, namely "cryptography" which means a secret code, and "currency" which means currency. Cryptocurrency is a virtual currency system that functions like a standard currency that allows users to make payments virtually for money. business transactions that occur without service fees but still have a centralized trust authority. • Before making a decision to invest, an investor must understand the relationship between risk and return from an investment, usually the greater the level of risk from an investment, the greater the return to be obtained and vice versa, because the relationship between risk and return from an investment has a relationship. linear ones.
6	RichardMarc Lacasse	Blockchain Technology - Arsenal for a ShariahCompliant Financial Ecosystem?	2017	<ul style="list-style-type: none"> • Blockchain Technology – An incorruptible digital ledger of economic transactions that can be programmed to record not only financial transactions but virtually any value. (transletter).
7	Ullah, Nazim	Crowdfunding, Crypto-Currency, Blockchain, Financial Dealings: Review Of Business Planning, Challenges And Issues.	2021	<ul style="list-style-type: none"> • Cryptocurrency Defines Alternatives To Fiat Currencies In Making Financial Transactions. • Unlike Cryptocurrencies, Fiat Has No Intrinsic Value Because Its Value Is Attached To Public Beliefs About Central Banks And Governments; Then Decentralized Cryptocurrency (Hileman Danrauch, 2017). • Blockchain And Cryptocurrencies Work

				<p>Interactively To Revolutionize Payments By Allowing Trading Parties To Exchange Value Directly As Widely Proven By Bitcoin Capitalization (Guo Dan Liang, 2016).</p> <ul style="list-style-type: none"> • Transactions by increasing speed, lowering fees and increasing transparency
--	--	--	--	---

3.1 Money and Bitcoin concept

Based on the findings found in 7 literatures relevant to this paper. The concept of money describes the understanding of money in general is an object that is approved by the community as an intermediary tool to hold or make it a medium of exchange which makes it a trading tool. In the literature it is also stated that what is meant by "approved" in this definition is that there is an agreement among community members to use one or several objects as an intermediary tool in exchange activities.

Bitcoin or abbreviated as "BTC" is a digital currency, which is not issued by institutions, organizations or governments in its regulation. Bitcoin utilizes a peer-to-peer network as its distribution medium using advanced cryptographic protocols.

3.2 Blockchain, Cryptocurrency and Islamic Finance

Fintech platforms in general began to develop rapidly since 2015 until now, most of which are still based on conventional systems. Humayon Dar, as Director General of the Islamic Research and Training Institute (IRTI), said that "the value of the sharia industry in the world is still very low compared to conventional industries". in 2018. This addition is expected to be a breakthrough for the sharia fintech industry in its future growth. According to the Financial Services Authority (OJK), the FinTech industry in Indonesia is divided into several areas, namely: 1) financial planning, 2) crowdfunding, 3) lending,) aggregation, 5) payments and 6) other financial technologies.

Based on the 30 September 2020 data above, 156 companies have been registered with the Financial Services Authority (OJK). 1 conventional fintech company and the remaining 11 sharia fintech. Of the number mentioned above, only 33 companies have licenses, the remaining 123 companies have been registered. In the coming years, it is likely that the existence of the sharia fintech industry will increase. In 7 relevant articles, 4 of them have positive views regarding the blockchain phenomenon, cryptocurrency in the development of Islamic Finance. However, for this phenomenon, the researcher provides relevant and appropriate reasons in socio-economic reality.

In one translated article, blockchain is an incorruptible digital ledger of economic transactions that can be programmed to record not only financial transactions but virtually any value (Richard. M, 2017). Blockchain is basically a public, immutable, distributed ledger. To add a new block, a transaction verifier called a 'miner' is needed. Miners compete with each other for the right to add blocks and the winning miner will get a reward (Zhang, Cui, Ma, & Yang, 2019). The analysis carried out reveals several important points related to the issue of cryptocurrencies that can be seen from the point of view of Islamic economics. This is an opportunity as well as a challenge for Islamic finance in Muslim countries. Basically cryptocurrency is a means of exchange, but the value of cryptocurrency is not an independent standard value, it takes the value of fiat currency to determine the value of fiat currency to determine the value of cryptocurrency so that cryptocurrency can be used as a medium of exchange, (Adam, 2017).

Cryptocurrency is the name given to a system that uses the word cryptography (cryptocurrency) which means a secret code word. This currency functions as a standard currency that allows users to make payment transactions in a virtual way. Cryptocurrencies provide an alternative to fiat currencies in conducting financial transactions. The Islamic Finance Ecosystem notes the need for advanced technology that can support the performance of a centralized financial



system. In accommodating this demand, blockchain integrated into cryptocurrency is a fintech that has the potential to offer opportunities that can provide benefits to the community in the needs of economic transactions. However, in the perspective of Islamic law, the use of cryptocurrency as a currency is not justified (haram). The decision was taken at the Ijtima Ulama Forum held at the Sultan Hotel which was attended by MUI Chair Asrorun Niam Soleh said the decision was taken for a number of reasons.

"From the deliberations that have been determined there are three legal dictums, the first is the use of cryptocurrency as a legal currency because it is haram because it is gharar, dharar, and contrary to law number 7 of 2019 and BI regulation number 17 of 2015,"³ Based on the description of the research results, there are Islamic Technology Opportunities that can be Sharia Technology Development Opportunities in Indonesia.

1. Most of Indonesia's population is Muslim.
2. Number of Indonesian adults who do not have access to financial services.
3. Increasing number of smartphone users.
4. The number of individuals and entrepreneurs, both MSMEs and businesses that need loans can be targeted.
5. The profit-sharing system is a special attraction for the community where Fintech can serve people who have not been served by the financial industry in the village.
6. Changes in people's lifestyles.
7. The existence of regulatory authorities and legal umbrellas as a form of government assistance in the development of sharia fintech law in the country.
8. The COVID-19 pandemic, seen from the other side, has the potential to accelerate the development of Fintech in the country and help revive the economic sector which is inadvertently considered safer due to the lack of direct contact to mitigate the spread of the COVID-19 virus.

The challenges for the development of sharia fintech in the country are:

1. There are very few Sharia FinTechs registered with the OJK, this may be due to a lack of capital and knowledge of sharia business rules.
2. The rise of illegal fintech, as well as competition with conventional fintech, is growing rapidly.
3. Infrastructure, lack of public awareness and knowledge about Islamic finance, and lack of qualified human resources support the growth of Islamic Fitech.

4. CONCLUSION AND SUGGESTIONS

4.1 Conclusion

The development of sharia fintech in Indonesia still provides large and wide open opportunities, but it must be followed by easier regulations, adequate infrastructure, and socialization of a good understanding of sharia finance so that sharia fintech can develop further and minimize the rapid growth of fintech - illegal fintech. . The COVID-19 pandemic has given its own blessing to the development of fintech in Indonesia, especially sharia fintech when society is overshadowed by the economic uncertainty of sharia fitech bringing solutions for digital financial innovation where transactions are easier, and people can consult without physically meeting.

4.2 Suggestions

1. There is a need for special treatment from the government in responding to the development of fintech, especially sharia fintech, so that illegal fintech fintech does not thrive until it can ultimately harm the community.
2. Increased socialization to instill Islamic finance into the community, socialization can occur through religious leaders who are respected by the community.

5. CLOSING

The use of digital currency has spread to other sectors in the form of utilization smart contracts namely a contract whose implementation runs automatically when the parties involved fulfill the agreement that has been set in the system. Digital currency has also begun to be applied to sector banking, industry pharmacy, and real estate, as well as network electricity. This is possible because of blockchain technology. Currently, blockchain technology is increasingly being used in various sectors of life by various market players from small to large business scales.

Then with this haram rule, does it mean that the use of digital currency in other sectors is also automatically haram? We need to conduct further and more thorough studies so that users can enjoy the technology comfortably and safely. For those who have already implemented/invested together, they will study further to maximize the value of the benefits" rather than "the harm" to make it clearer.

REFERENCES

- CCAF, ADBI, FinTechSpace. 2019. ASEAN FinTech Ecosystem Benchmarking Study. Cambridge, UK.
- Darmiyati Zuchdi, Content Analysis Research Guide, (Yogyakarta: Yogyakarta IKIP Research Institute, 1993).
- Evandio, Akbar. 2020. Recognize the Six Types of Contracts in Fintech Sharia. <https://finansial.bisnis.com/read/2020226/231/1205982/know-six-type-contract-infintech> accessed on 19/10/2021 Time: 17.20 WIB.
- Feber, W., & Muchlis, M. (2021). KINERJA PETUGAS PEMADAM KEBAKARAN KABUPATEN BULUNGAN DALAM PENANGANAN KEBAKARAN DI KECAMATAN TANJUNG SELOR KABUPATEN BULUNGAN. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, Dan Pendidikan*, 1(1), 1–10. Retrieved from <https://publish.ojs-indonesia.com/index.php/SIBATIK/article/view/2>
- Geovani, I., Nurkhotijah, S., Kurniawan, H., Milanie, F., & Ilham, R. N. (2021). JURIDICAL ANALYSIS OF VICTIMS OF THE ECONOMIC EXPLOITATION OF CHILDREN UNDER THE AGE TO REALIZE LEGAL PROTECTION FROM HUMAN RIGHTS ASPECTS: RESEARCH STUDY AT THE OFFICE OF SOCIAL AND COMMUNITY EMPOWERMENT IN BATAM CITY. *International Journal of Educational Review, Law And Social Sciences (IJERLAS)*, 1(1), 45-52.
- Idhom, Addi M. 2020. Latest Illegal Fintech Data Finding Task Force-OJK. <https://tirto.id/datafintech-illegallatest-findings-task-force-ojk-updates25-september-2020-f5ct>. accessed on November 26, 2021. At 21.05 WIB.
- Ilham, R. N., Sinaga, S., Putri, D. E., Sinta, I., & Fuadi, F. (2021). EFEK DARI LEVERAGE DAN UKURAN PERUSAHAAN DALAM MEMENGARUHI TINGKAT PROFITABILITAS. *JURNAL ILMIAH EDUNOMIKA*, 5(02).
- Indonesian Digital Report 2020. 2020. Digital 2020 Indonesia. Hootsuite (We are Social).
- Jayadi, U. (2020). KEPEMIMPINAN PENDIDIKAN ISLAM DALAM PERSPEKTIF INTERDISIPLINER. *Management of Education: Jurnal Manajemen Pendidikan Islam*, 6(1).
- Kusnandar, Viva Budy. 2019. 92 Million Population Mature Indonesia yet Touched Financial Services. <https://databoks.katadata.co.id/datapublish/2019/10/08/92-million-penis-dewasa-indonesiabelum-tertouchuh-jasa-finansial>.
- Lexy J. Moleong, *Qualitative Research Methodology*, (Bandung: PT Remaja Rosdakarya, 2017).
- Marginingsih, Ratnawaty. 2019. SWOT Analysis Technology Financial (FinTech) Towards the Banking Industry. *Journal Cakrawala* Volume 19 No.1 March 2019 PISSN 1411-8629, EISSN: 25793314.



- Indonesian Ulema Council (MUI), <https://www.cnnindonesia.com/economy/20211111135117-78-719745/mui-haramkan-use-money-crypto> accessed on 06 January 2022.
- Maulida, Ani. 2019. Fintech: Definition, Types, Until Regulation in Indonesia 2019 <https://www.online-tax.com/about-tax-personal/fintech>. accessed on 19 October 2021 at 13.30 WIB.
- Puspaningtyas, Lida. 2020. Main Obstacles to Development Fintech Sharia. <https://republika.co.id/news/q4c-j9p368/obstacles-main-developer-just-emfintech-em-sharia>. accessed on 26 November 2020 at 23:49 WIB.
- Sanjaya, S., Ammy, B., & Parlindungan, R. (2021). DETERMINANT MODEL OF CORPORATE DISCLOSURE SOCIAL RESPONSIBILITY. *International Journal of Educational Review, Law And Social Sciences (IJERLAS)*, 1(2), 159-170.
- Siregar, AE 2016. Financial Technology Future Trends in Financial Business. Retrieved December 27, 2018, from <http://infobanknews.com>.
- Wiratmini, Ni Putu Eka. 2020. The Number of Illegal Fintech Increases. <https://economy.bisnis.com/read/20200314/9/1213283/total-fintech-illegal-increase>. Accessed on 2/11/2021 at 10:50 WIB.

