



## Construction of Financial Technology in Banking Systems in Indonesia

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### Abstract

**Introduction to The Problem:** The use of information technology innovations in banking today through digital platforms or online or known as financial technology (commonly abbreviated as fintech) can indeed provide financial services to the public at a lower cost than traditional banking methods. But behind the sophistication of technology as well as an increase in banking risk, especially if the regulations that govern it have not been comprehensive.

**Purpose/Objective Study:** This paper examines the development of various regulatory regulations in the field of fintech in Indonesia.

**Design/Methodology/Approach:** The research method used in this study is qualitative through normative legal research. The obtained data analyzed by statutory approach to interpret the existing legal rules on Indonesian Banking.

**Findings:** The results obtained are that the existence of fintech which is considered as disruptive innovation (disruptive innovation) has changed the old market and revolutionized the workings of traditional financial institutions. Therefore, the government through the financial authority that is authorized to respond to the development of fintech in the Indonesian banking system by making various regulations. In addition, the development of fintech business integration with banking institutions must also be a concern for both parties so that the development of fintech is not only a disruption but can also be a safe innovation for customers to use.

**Paper Type:** Research Article

**Keywords:** Fintech; Banking System; Indonesian Bank Regulations

### Introduction

The digital era or the era of information technology that is rapidly being utilized by the public and the banking industry is currently increasing the efficiency of operational activities and the quality of bank services to customers. Digital banking services such as e-banking or electronic banking services, for example, are a service for bank customers to be able to obtain information, communicate, and conduct banking transactions through electronic media (Pinontoan, 2012). Digital banking has evolved and evolved in decades from just internet banking services. In the mid-1990s,



the services became fully digital, and it evolved as an industry in the early 2000s. As for now, it began to include financial services for the general public, such as crowdfunding or peer-to-peer lending. Regarding this digital banking, OJK (i.e., Otoritas Jasa Keuangan), based on the results of research conducted by McKinsey & Company regarding digital banking in 2014, there were around 40% of mass affluent segment customers in Asia currently prefer digital banking services. Digital banking customers in Asia currently reach 670 million and are expected to grow to reach 1.7 billion customers by 2020 (Chen, Hv, & Lam, 2014; Djumhana, 2012).

The development of information technology and innovation has given rise to the business of financial technology (from now on abbreviated as fintech) to fill a niche market that has not been touched by conventional banks (Lembaga Penjamin Simpanan, 2016). Fintech is an innovation in finance that combines financial services and information technology (Marginingsih, 2019; Muchlis, 2018). The entry of fintech is a breakthrough in business and banking aspects in Indonesia so that it can become more efficient and more accessible.

Fintech is a form of application of information technology in the new financial sector and first appeared in 2004 in the UK by Zopa, a financial institution that runs money lending services (Rizal, Maulina, & Kostini, 2018). It then began a new financial model through the Bitcoin software that was conceived by Satoshi Nakamoto in 2008. From a historical perspective, the core concept of fintech development is unseparated from the peer-to-peer (P2P) concept that was used previously by Napster for music sharing in 1999 (Milne & Parboteeah, 2016).

In Indonesia itself, fintech firstly known in September 2015 since the emergence of the Indonesian Fintech Association (Rusydia, 2019). This association aims to provide trusted and reliable business partners to build the fintech ecosystem in Indonesia. Fintech in Indonesia then began to develop rapidly and became a trend in 2016 to 2017. The pioneers in the development of fintech in Indonesia were Go-Jek companies that were established in 2010 and became a trend after 4-5 years of Go-Jek's founding. With the establishment of Go-Jek, many other companies have also adopted fintech as the basis of their company (KlikLegal.com, 23/3/2018).

As also happened in various countries in the world, fintech in Indonesia has also become one thing that is snowballing. Every year even new fintech companies continue to emerge whose numbers are increasing compared to several years before. It has added to the pressure on the government and stakeholders, especially financial institutions and legislative bodies, to draft new legislation that can provide a basis for fintech companies to operate in various banking sectors while still paying attention to the protection of customers and the country itself (Davis, Maddock, & Foo, 2017). In this case, there is no denying the rapid development of technology compared to the laws that govern it makes regulation seem slow. It is also the reason why, when the first fintech start-up emerged, there was no comprehensive regulation underlying it.



Moreover, it has institutions or associations that overshadow and can support its implementation.

Utilization of information technology innovations in banking through digital platforms or online or known as fintech will certainly provide financial services to the public who have not yet reached financial access, at a lower cost than traditional banking methods so that financial services will become more affordable for the wider community. As stated by the TransferWise survey, 5 (five) factors that encourage current consumers to choose fintech providers compared to conventional banking are: safer services (34%), lower costs (29%), more convenient services (26 %), faster service (18%), better customer service (18%) (Nicoletti, 2017). In his research, McKinsey also estimated that in the future, in the next 2025, the banking retail business market share will be eroded by tekfin or fintech. It is due to intense competition in line with technological advances and the development of digitalization in the financial industry (Yudistira, 2018).

This paper will explain what provisions are regulated in various laws and regulations relating to fintech in Indonesia as a legal basis for fintech that has been issued by the Indonesian government. Also, it will explain the development of fintech integration in the banking system in Indonesia so that it can be seen how far fintech can play a role in the progress of the Indonesian economy. Some questions related to fintech in Indonesia from a legal point of view are formulated into 2 (two) problem formulations, namely: What are the legal aspects of the implementation of financial technology that are regulated in the laws and regulations in Indonesia and How is the description of the integration development of fintech organizers with banks in Indonesia.

### **Methodology**

The research method used in this study is normative legal or normative legal research. Normative legal research is legal research conducted by examining library materials or secondary data obtained from library materials in the form of books and various laws and regulations and other legal documents.

In analyzing the data, the writer uses the statutory approach by examining various laws and regulations related to Fintech in Indonesia, and the conceptual approach (conceptual approach) by observing the development of the concept and the Fintech term from several scientific papers in opinion and international journals such as the Law and Financial Markets Review and the Oxford University Capital Market Law Journal.

The results of the analysis of legal materials obtained were then interpreted using the analytical and systematic interpretation/interpretation method. The interpretation is used to be able to decipher the meaning of the provisions of the law into the simple common everyday language (Mertokusumo, 2010). Furthermore, the use of systematic interpretation is a method of interpreting the law that interprets the



statutory regulations by linking them with legal regulations or other laws or with the whole legal system (Mertokusumo, 2009). Systematic interpretation is used because what is interpreted are articles in the law. Therefore, the legal provisions, as well as the principles in other legal regulations, must also be used as a reference.

## Results and Discussion

### **Legal Aspects of the Implementation of Financial Technology in Legislation in Indonesia**

#### ***Regulation Regarding Peer-To-Peer Lending Regulated in Financial Services Authority Regulation Number 77/POJK.01/2016 concerning Information Technology-Based Lending and Borrowing Services***

So far, the provisions regarding Fintech are still few and unregulated comprehensively. However, the Financial Services Authority (OJK) and the several regulations issued in Indonesia are; first, the regulation made by the Financial Services Authority in its regulation Number 77/POJK.01/2016 on the Information Technology-Based Money Lending and Borrowing Services. It regulates various matters that must be complied with by the loan business provider from user to user, or commonly referred to as Fintech peer-to-peer lending (P2P lending). The aim of this regulation is to protecting consumers related to the security of funds and data, preventing money laundering and financing of terrorism, financial system stability, to the managers of fintech companies.

In this regulation, the information technology-based lending and borrowing services define as providing financial services to bring together lenders and loan recipients in the context of entering into a loan agreement in the rupiah currency directly through an electronic system using the internet network. Information lending and borrowing service providers can be in the form of limited liability companies or cooperatives as Other Financial Services Institutions (Article 2). This regulation also provides an opportunity for foreigners to become founders and shareholders of the organizer. However, ownership of the organizer's shares by foreign citizens or foreign legal entities, both directly and indirectly, is determined to be a maximum of 85 (eighty-five) percent (Article 3 paragraph (2)).

In the form of limited liability companies or cooperatives, providers of information technology-based lending and borrowing services are required to have a minimum paid-up capital of Rp 1,000,000,000.00 (one billion rupiahs) at the time of registration. Whereas when applying for a permit, providers of information technology-based lending and borrowing services are required to have their capital of at least Rp 2,500,000,000.00 (two billion five hundred million rupiahs) (Article 4). The Application filling for registration for information technology-based lending and borrowing service providers is no later than 6 (six) months after this regulation takes effect. Meanwhile, the submission permit application is for a maximum of 1 (one) year



after the information technology lending and borrowing service provider is registered with the Financial Services Authority (Santi, Budiharto, & Saptono, 2017).

This regulation regulates the organization of information technology-based lending and borrowing, which is a rule for fintech that provides financing from lenders to loan recipients, or the term is a peer-to-peer scheme. Based on the provisions in Article 15 of the regulation, those who can become loan recipients are those originating and domiciled in the jurisdiction of the Republic of Indonesia, both individuals and legal entities.

Regarding the number of loanable funds allowed, the maximum limit of total lending funds regulated in this regulation is at Rp 2,000,000,000.00 (two billion rupiahs) (Article 6 paragraph (2)). Every registered Fintech should provide periodic reports every 3 (three) months to the Financial Services Authority (Article 9). Fintech peer-to-peer lending is also required to have qualified human resources who have the expertise and background in information technology with at least 1 (one) member of the Board of Directors and 1 (one) member of the Commissioner with at least 1 (one) experience year in the financial services industry (Article 14).

The mechanism of implementing information technology-based lending and borrowing services (Fintech peer-to-peer lending) is carried out through an escrow account for the organizer and a virtual account for the lender. The mechanism regulated in Article 24 of the regulation, which states that providers are required to use escrow accounts and virtual accounts within the framework of Information Technology Based Money Lending and Borrowing Services. The Provider also required to provide a virtual account for each Lender. Lastly, in order to repay the loan, the loan recipient makes payments through the operator's escrow account to be forwarded to the lender's virtual account.

#### ***Regulation of Payment Transaction Process with Financial Technology Regulated in Bank Indonesia Regulation Number 18/40/PBI/2016 concerning Implementation of Payment Transaction Processing***

To support the implementation of Fintech in Indonesia, Bank Indonesia subsequently also issued regulations regarding the implementation of payment transactions through Bank Indonesia Regulation Number 18/40/PBI/2016 concerning the Implementation of Payment Transaction Processing. Through this provision, Bank Indonesia regulates, gives grants and licenses, and oversees the operation of payment system services performed by principals, issuers, acquirers, clearing operators, final settlement operators, and fund transfer operators. The general explanation of Bank Indonesia Regulation Number 18/40 / PBI / 2016 concerning the Implementation of Payment Transaction Processing explains that:

“The development of the use of internet and communication technologies such as smartphones is encouraging the development of electronic commerce (e-commerce) and financial technology (fintech) businesses so as to bring up



various innovations and new parties' involvement in organizing payment transaction processing, such as Payment Gateway Organizers and Electronic Wallet Providers, as well as Supporting Providers such as companies providing contactless transaction support technology.”

The presence of new parties in the implementation of payment transaction processing also impacts the development of infrastructure and payment mechanisms that unregulated, specifically in current Bank Indonesia regulations. To ensure that these developments continue to meet the principles of implementing a payment system that is safe, efficient, smooth and reliable by paying attention to aspects of consumer protection, Bank Indonesia applies a license for the operation of payment system services by parties that not covered by the current Bank Indonesia regulations.

General coverage in Bank Indonesia Regulation Number 18/40/PBI/2016 covers organizers in processing payment transactions, licensing and approvals in conducting payment transaction processing, obligations in conducting payment transaction processing, reports, transfer of system service permit payment and supervision, prohibitions, and sanctions. The parties involved in the payment transaction process as regulated in this regulation divided into 2 (two), namely Payment System Service Providers (PJSP) and Payment System Supporting Operators (Supporting Providers).

Based on Article 1 number 3 of this regulation, the meaning of the Payment System Service Provider is a Bank or Non-Bank Institution, which is conducting payment system service activities. Payment System Service Providers consist of Principal, Switching Operator, Issuer, Acquirer, Payment Gateway Operator, Clearing Operator, Final Settlement Operator, Fund Transfer Operator, and Electronic Wallet Operator Electronic. Meanwhile, the Payment System Supporting Provider as described in Article 1, number 4 of Bank Indonesia Regulation Number 18/40 / PBI / 2016 concerning the Implementation of Payment Transaction Processing is the party providing services to Payment System Service Providers in order to support the operation of payment system services. In this case including; (1) card printing; (2) personalize payment; (3) Provision of data centers (data centers) or disaster recovery centers; (4) terminal provision; (5) providing payment instrument security features and payment transactions; (6) providing contactless transaction support technology; (7) providing forwarding (routing) data supporting payment transaction processing (vide Article 3 paragraph (3) of Bank Indonesia Regulation Number 18/40/PBI/2016 concerning Processing of Payment Transactions).

Concerning the ownership structure of the organizer, this regulation regulates that each party acting as a Payment System Service Provider must first obtain a license from Bank Indonesia (Article 4 paragraph (1)). In addition, for licensing purposes, the party who will submit a permit to become a Principal, Switching Operator, Clearing Operator, or Final Settlement Operator must be a limited liability company with at



least 80% (eighty percent) of shares owned by Indonesian citizens or Indonesian legal entity (Article 5 paragraph (2)).

In order to carry out payment transaction processing so that it can provide protection to consumers or service users, each Payment System Service Provider must implement risk management effectively and consistently, apply information system security standards, carry out payment transaction processing domestically, implement consumer protection and meet the provisions legislation (Article 18 paragraph (1)). The application of the principle of consumer protection in the administration of payment transaction processing regulated in this regulation is based on the principles of fairness and reliability, transparency, protection of consumer data or information, and also useful handling and resolution of complaints (Article 24 paragraph (2)).

***Regulations Regarding the Implementation of Financial Technology Regulated in Bank Indonesia Regulation Number 19/12/PBI/2017 concerning Implementation of Financial Technology***

The development of financial technology or fintech in Indonesia, which is growing so fast is more or less worried that the government will harm the implementation of banking in Indonesia, especially given the limited legislation governing this fintech. Therefore, Bank Indonesia then issued Bank Regulations Indonesia Number 19/12/PBI/2017 concerning the Implementation of Financial Technology, which expected to become a capable legal umbrella for fintech in order to maintain the stability of the financial system in Indonesia.

The issuance of this regulation aims to support the creation of monetary stability, financial system stability, as well as an efficient, smooth, safe, and reliable payment system to support sustainable and inclusive national economic growth by applying the principles of consumer protection and risk management and prudence. Article 2 of Bank Indonesia Regulation Number 19/12/PBI/2017 concerning Financial Technology Implementation also explains that Bank Indonesia regulates the implementation of Financial Technology to encourage innovation in the financial sector 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.

In this regulation the term fintech is given an official explanation in the legislation, wherein Article 1 number 1 of this regulation, fintech or referred to as financial technology is interpreted as “the use of technology in the financial system which produces new products, services, technology or business models and can have an impact on monetary stability, financial system stability, or the efficiency, smoothness, security, and reliability of payment systems.”

The growth of financial technology has become an inevitable trend. Price Waterhouse Coopers views fintech as “a dynamic segment at the intersection of the financial



services and technology sectors where technology-focused startups and new markets entrants innovate the products and services currently provided by the traditional financial services industry (Chiu, 2017).” Fintech is now, even in various areas of financial services, ranging from service products to capital. The growth has led to the development of fintech, which is referred to as “disruptive innovation,” because of its existence, which has created new markets and values, which ultimately “disrupts” the existence of existing markets (Tripalupi, 2019). This is precisely what is covered in this regulation, where the Implementation of Financial Technology in this regulation categorized into 5 (five) categories, namely; (1) payment systems; (2) market support; (3) investment management and risk management; (4) loans, financing, and; (5) the provision of capital and other financial services (Article 3 paragraph (1)).

New thing regulated in Bank Indonesia Regulation Number 19/12/PBI/2017 concerning the Implementation of Financial Technology compared to the two previous rules is the stipulation of the obligation for financial technology providers to register with Bank Indonesia (Article 5). Based on Article 6 of this regulation, the Provider of Financial Technology must also be a business entity, except for Providers of Financial Technology in the form of institutions other than banks that meet the category of Payment System Services Provider, the Provider of Financial Technology it must be a business entity incorporated in Indonesia.

Besides, another thing concerning fintech, which also has regulated through this regulation is the regulation regarding regulatory sandbox or limited trial space as regulated in Article 11 through Article 14 of Bank Indonesia Regulation Number 19/12/PBI/2017 concerning Implementation of Financial Technology. Article 1 number 4 interprets the term regulatory sandbox as “a safe limited trial space for testing Financial Technology Providers and their products, services, technology or business models.” In this program, Bank Indonesia will conduct the supervision and evaluation of service innovations Fintech. The aim is to make room for Financial Technology Providers to further ensure that their products, services, technology, or business models meet the criteria for Financial Technology.

Bank Indonesia may also determine that a fintech operator falls within the category of a payment transaction of processing service providers (such as Switching providers, Gateway Payment providers, electronic wallet providers, or other Payment System Service Providers). If the results of a limited trial state that a fintech operator does not meet the specified requirements and fails, the fintech organizers cannot implement their fintech service products. Whereas for fintech operators who are declared not included in the fintech category of payment system services, Bank Indonesia will provide the best test results given to the competent authority (Makarim & Taira, 2018).

In the context of implementing this regulation, Bank Indonesia has also issued provisions for implementing Bank Indonesia Regulation Number 19/12/PBI/2017





concerning the Implementation of Financial Technology, namely Regulation of the Members of the Board of Governors Number 19/14/PADG/2017 concerning Regulatory Sandbox Technology Financial and Regulations of the Members of the Board of Governors Number 19/15/PADG/2017 concerning Procedures for Registration, Submission of Information and Monitoring of Financial Technology Providers. Those who violate the provisions in the regulation may be subject to sanctions starting with a written warning, having their business activities terminated, until their license is revoked by Bank Indonesia or by another authorized authority upon recommendation from Bank Indonesia (Article 20-23).

***Regulation of Digital Financial Innovation Services Regulated in Financial Services Authority Regulation Number 13/POJK.02/2018 concerning Digital Financial Innovations in the Financial Services Sector***

Financial Services Authority Regulation Number 13/POJK.02/2018 concerning Digital Financial Innovations in the Financial Services Sector is a regulation in the realm of fintech issued by the Financial Services Authority. This regulation governs digital financial innovation (i.e., Inovasi Keuangan Digital [abbreviated as IKD]), which is a business process renewal activity, business model, and financial instruments that provide new added value in the financial services sector by involving the digital ecosystem (Article 1 number 1). As explained previously, the rapid development of technological innovation in banking services cannot be ignored and therefore needs to be managed in order to provide maximum benefits for the benefit of the community.

There are several primary fintech arrangements governed in this regulation, which are as follows (Financial Services Authority, 2018):

1. Fintech Registration and Registration Mechanism
2. Fintech Monitoring and Oversight Mechanism
3. Formation of the Fintech Ecosystem
4. Building a Culture of Innovation
5. Inclusion and Literacy
6. Business and Data Protection
7. Effective Risk Management
8. Collaboration
9. Consumer protection
10. Transparency
11. Anti-Money Laundering and Terrorism Funding

**Development of Fintech Integration with Banking in Indonesia**

The development of the financial technology industry or financial technology (fintech) is now unstoppable. From the various discussions at the beginning of this article, there have been many regulations drawn up by related regulators namely the Financial Services Authority and Bank Indonesia in order to ensure that the implementation of financial services that have developed at this time can have a clear



legal basis and ultimately provide security for the people as its users. However, the challenge that still exists today is, of course, ensuring the safety of the community related to the accountability of data utilization. The ease of various fintech services starting from the registration or registration stage to transactions that can be done via smartphones or users have their risks. It is because fintech companies can access digital data contained in smartphones to their users' social media accounts.

Payments are arguably the most affected area of fintech development (Thakor, 2019). Responding to the fintech trend, which is increasingly unstoppable by the impact of the disruption, something else arises, which is then worthy of discussion. First, let the fintech community remain free to create on the one hand, and on the other hand, also provides convenience and freedom for the financial industry sector, such as banks, insurance, and other financial institutions that also provide the same opportunity. It is a neutral choice because both parties have the same opportunity. Second, regulating financial-based fintech companies to be regulated is similar to regulating banking institutions. It is also a choice that both provide the opportunity to compete entirely. Third, give a little more freedom to financial institutions to innovate through application-based services. It is considering the developments that are still happening at the moment, as free as possible treatment of financial institutions is still a better choice than giving freedom to fintech start-ups, although certainly not all fintech start-ups are wrong and illegal. At least the financial institutions that are already under the supervision of the FSA can be more easily identified (Wijaya, 2019).

To bridge these various choices, the government then issued a Financial Services Authority Regulation Number 12/POJK.03/2018 concerning Digital Banking Services Provided by Commercial Banks. This regulation made based on the increase in new financial service players known as providers of financial services based on Information Technology (financial technology) that offers innovations in financial services. This has an impact on increasing competition in the financial services industry and encouraging players to be able to provide higher quality services and provide added value to customers in order to maintain their existence, especially with the Bank as one of the leading players in the financial services industry (General Explanation of Financial Services Authority Regulation Number 12/POJK.03/2018 concerning Digital Banking Services Provided by Commercial Banks).

One of the provisions in the Financial Services Authority Regulation Number 12/POJK.03/2018 concerning the Implementation of Digital Banking Services by Commercial Banks is the provision of data interconnection between banks and technology companies engaged in the financial sector (fintech), which is currently being pursued standardization by Bank Indonesia. Based on Article 15 paragraph (3) of the Financial Services Authority Regulation Number 12/POJK.03/2018, Bank Partners (which in this case are providers of Information Technology-based financial services) in providing transactional services can utilize connectivity between the electronic systems of the Bank and the electronic systems of the Bank's partners. The



connection between the Bank's electronic system and the electronic system of the Bank's partners is made through an open application programming interface (Open API) (Explanation of Article 15 paragraph (3) Regulation of the Financial Services Authority Number 12/POJK.03/2018 concerning the Implementation of Digital Banking Services by Commercial Banks). With this provision and efforts to standardize APIs in technology-based financial services, it hopes that all the processes of exchanging data between banks and fintech operators can run safely and meet international standards in the operation of digital transactions. Also, the requirement that must be met about data security, including data connectivity with the General Directorate of Population and Civil Registration (Dukcapil) and the Ministry of Home Affairs to process data validity can be a step in supporting the future customer data protection.

Anticipating the possibility of the Bank's integration with fintech organizers and overseeing the influence of the widespread fintech products application, several points must be considered by the parties. In terms of law and regulation, the government, as a regulator, must start to consider regulating fintech and its integration with the banking system at the level of the law. As explained in the previous discussion, various existing regulations are limited within the scope of institutional level regulations that are formed by the law or the government in the orders of the relevant laws, in this case, the Financial Services Authority and Bank Indonesia. Current experience shows the ineffectiveness of these institutional level regulations because the material content is not as complete as the legal products, for example the absence of criminal sanctions provisions therein, making it even more difficult to act against fintech abuse, especially fintech products in the form of peer-to-peer loans (P2P lending) (CNN Indonesia, 2019). With the regulation of fintech in the law, in addition to facilitating the application of regulations in one regulation, fintech regulation will become more comprehensive and provide legal certainty for all stakeholders.

From the bank side, in this case, the bank can develop a fintech innovation framework as a guideline for the use of fintech strategies, then the bank can choose an operating model of innovation that can connect new ideas according to business needs, and the hybrid model can be one of the solutions. The bank must also analyze the pros and cons of implementing Fintech's engagement strategy in its business and choose an innovation model that can support its long-term business strategy. Finally, the Bank can manage human resource management in institutional organizations that support the flexibility of fintech implementation (Ernst & Young Global Limited, 2017).

In this case, fintech providers also need to evaluate their business approach in terms of integration with banking institutions. First, determine the proportion of values that can explain clearly whether they are, what they are aiming for, and what problems they want to solve, whether the existence of this fintech is disruptive, incremental, or very necessary. Second, fintech must also be able to set high standards of integrity



and be able to understand various regulations and requirements that they must obey as part of the banking ecosystem. Third, fintech must be able to prepare themselves and have an extensive network (well-networked), considering that the banking institution must already have its innovation development team that is trusted and to be able to compete with the internal team, fintech has to innovate with its characteristics. Finally, fintech can arrange for itself how they can collaborate and contribute while also maintaining the confidentiality of innovation (Ernst & Young Global Limited, 2017).

The development of fintech and the encouragement of data disclosure with banking institutions currently continue to be a particular concern for the government, so that efforts to encourage the development of fintech companies into a country that can meet the needs of the times becomes an unavoidable need. Even though the initial process has been running for a long time, what is still a significant concern for fintech entrepreneurs is how to make the openness of the data transaction process possible, especially with the preparation of API standards in banking institutions (Chishti & Barberis, 2016). Banking institutions that currently seem cautious to give access to data to outsiders are understandable, but with the OJK regulation related to Digital Banking Services Provided by Commercial Banks, it is hoped that in the future fintech construction in the banking system can be realized in the interests of the wider community.

### **Conclusion**

Financial technology or financial technology (fintech) that developed in Indonesia encourages the government to be able to issue several regulations as the legal basis for its implementation. The fintech business that is growing and in contact with the banking business, especially in the area of payments, consumers, and microloans, describes the nature of fintech as a disruption. So that banking and fintech can continue to run optimally and not only see each other as competitors but also business partners, there needs to be an integrated regulation between the two, which is now under the auspices of the Financial Services Authority Regulation No. 12/POJK.03/2018 Concerning Operation Digital Banking Services by Commercial Banks. Nevertheless, the formation of regulations at the level of the law is also an urgent need given the limitations of the material content that can be regulated in the level of institutional regulations that are formed based on laws such as the Financial Services Authority and Bank Indonesia.

### **References**

- Chen, J., Hv, V., & Lam, K. (2014). How to prepare for Asia's digital-banking boom. In *McKinsey&Co.*
- Chishti, S., & Barberis, J. (2016). *The fintech book: The financial technology handbook for Investors, entrepreneurs, and visionaries* (1st ed.). Cornwall: Wiley.
- Chiu, I. H. Y. (2017). A new era in fintech payment innovations? A perspective from the institutions and regulation of payment systems. *Law, Innovation and Technology*, 9(2), 190-234. <https://doi.org/10.1080/17579961.2017.1377912>



- CNN Indonesia. (2019). BI bakal standarisasi interkoneksi bank dan fintech. Retrieved February 1, 2019, from <https://www.cnnindonesia.com/ekonomi/20190527173755-92-398829/bi-bakal-standarisasi-interkoneksi-bank-dan-fintech>
- Davis, K., Maddock, R., & Foo, M. (2017). Catching up with indonesia's fintech industry. *Law and Financial Markets Review*, 11(1), 33-40. <https://doi.org/10.1080/17521440.2017.1336398>
- Djumhana, M. (2012). *Hukum perbankan di Indonesia*. Bandung: Citra Aditya Bhakti.
- Ernst & Young Global Limited. (2017). *Unleashing the potential of Fintech in banking contents*. Retrieved from [https://www.ey.com/Publication/vwLUAssets/ey-unleashing-the-potential-of-fin-tech-in-banking/\\$File/ey-unleashing-the-potential-of-fin-tech-in-banking.pdf](https://www.ey.com/Publication/vwLUAssets/ey-unleashing-the-potential-of-fin-tech-in-banking/$File/ey-unleashing-the-potential-of-fin-tech-in-banking.pdf)
- Lembaga Penjamin Simpanan. (2016). *Analisis stabilitas dan sistem perbankan*. Retrieved from <https://bit.ly/2qdMOi5>
- Makarim, & Taira. (2018). The rise of financial technology in Indonesia. Retrieved from Makarim.com website: [http://www.makarim.com/uploads/997184\\_Advisory%2520-%2520The%2520Rise%2520of%2520Financial%2520Technology%2520In%25-20Indonesia%2520](http://www.makarim.com/uploads/997184_Advisory%2520-%2520The%2520Rise%2520of%2520Financial%2520Technology%2520In%25-20Indonesia%2520)
- Marginingsih, R. (2019). Analisis SWOT technology financial (fintech) terhadap industri perbankan. *Cakrawala Jurnal Humaniora Universitas Bina Sarana Informatika*, 19(1), 55-60. Retrieved from <https://ejournal.bsi.ac.id/ejurnal/index.php/cakrawala/article/view/4893>
- Mertokusumo, S. (2009). *Penemuan hukum: Sebuah pengantar*. Yogyakarta: Liberty.
- Mertokusumo, S. (2010). *Mengenal hukum: Suatu pengantar*. Yogyakarta: Cahaya Atma Pustaka.
- Milne, A., & Parboteeah, P. (2016). The business models and economics of peer-to-peer lending. *ECRI Research Report*, (17), 1-35. <https://doi.org/10.2139/ssrn.2763682>
- Muchlis, R. (2018). Analisis SWOT financial technology (fintech) pembiayaan perbankan syariah di Indonesia (Studi kasus 4 Bank Syariah di kota Medan). *At-Tawassuth*, 3(2), 335-357. Retrieved from <http://jurnal.uinsu.ac.id/index.php/tawassuth/article/view/2735/1690>
- Nicoletti, B. (2017). *The future of fintech: integrating finance and technology in financial services*. London: Palgrave Macmillan.
- Pinontoan, W. (2012). Pengaruh e-banking, kualitas pelayanan, kualitas komunikasi dan kepercayaan terhadap loyalitas nasabah pada Pt. Bank Mandiri Cabang Manado. *Jurnal Riset Ekonomi, Manajemen, Bisnis dan Akuntansi*, 1(4), 192-201. Retrieved from <https://ejournal.unsrat.ac.id/index.php/emba/article/view/2650>
- Rizal, M., Maulina, E., & Kostini, N. (2018). Fintech sebagai salah satu solusi pembayaran bagi UMKM. *AdBispreneur: Jurnal Pemikiran Dan Penelitian Administrasi Bisnis Dan Kewirausahaan*, 3(2), 89-100. <https://doi.org/10.24198/adbispreneur.v3i2.17836>
- Rusydia, A. S. (2019). Bagaimana mengembangkan industri fintech syariah di Indonesia? pendekatan interpretive structural model (ISM). *Al-Muzara'ah*, 6(2), 117-128. <https://doi.org/10.29244/jam.6.2.117-128>
- Santi, E., Budiharto, B., & Saptono, H. (2017). Pengawasan otoritas jasa keuangan terhadap financial technology (Peraturan Otoritas Jasa Keuangan Nomor 77/Pojk.01/2016). *Diponegoro Law Journal*, 6(3), 1-20. Retrieved from



<https://ejournal3.undip.ac.id/index.php/dlr/article/view/19683>

Thakor, A. V. (2019). Fintech and banking: What do we know? *Journal of Financial Intermediation, In press*, 1-47. <https://doi.org/10.1016/j.jfi.2019.100833>

Tripalupi, R. I. (2019). Pengelolaan dokumen elektronik layanan jasa keuangan berbasis financial technology (fintech). *Jurnal Ilmu Akuntansi dan Bisnis Syariah*, 1(1), 13-22. Retrieved from [journal.uinsgd.ac.id/index.php/aksy/issue/download/413/pdf\\_1](http://journal.uinsgd.ac.id/index.php/aksy/issue/download/413/pdf_1)

Wijaya, K. (2019). *Tren fintek*. (April), 1-5. Retrieved from [http://lppi.or.id/site/assets/files/1425/a\\_13\\_tren\\_fintek.pdf](http://lppi.or.id/site/assets/files/1425/a_13_tren_fintek.pdf)

Yudistira, C. (2018). Fintech berpotensi menjadi pesaing bank. Retrieved February 1, 2019, from <https://keuangan.kontan.co.id/news/fintech-berpotensi-menjadi-pesaing-bank>