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Banking Transformation in the Digital Era: Bank Cooperation with Financial Technology and the Role of the Financial Services Authority in Digital Bank Supervision

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ABSTRACT: The Industrial Revolution 4.0 has brought significant transformations to various aspects of life, including financial activities, which have increasingly transitioned into digital systems facilitated by financial technology (fintech). Fintech accommodates remote financial activities, reshaping the banking industry through the emergence of digital banks that enhance customer convenience in accessing banking services. This development reflects the growing cooperation between banking institutions and fintech companies. However, digital-based financial activities are inherently susceptible to system vulnerabilities, potentially causing customer losses. This study explores two main issues: (1) the nature of cooperation between banks and fintech and (2) the role of the Financial Services Authority (OJK) in supervising digital banking operations. The findings reveal that collaboration between banking and fintech is achieved by integrating banking services with fintech platforms, enabling seamless customer access. The OJK employs direct (on-site) and indirect (off-site) supervision methods to ensure regulatory compliance and mitigate risks. Additionally, the OJK leverages advanced technologies such as the OSIDA (OJK Suptech Integrated Data Analytics) system to optimize supervision and implement a regulatory sandbox framework to foster innovation while maintaining oversight.

KEYWORDS: Financial Technology, Supervision, Digital Bank.

I. INTRODUCTION

In the digital era, technology and information accommodate and enhance the efficiency of society's basic needs. The Industrial Revolution 4.0, the digital revolution, emerged with the influence of the Internet of Things (IoT), integrating industry with advanced technology. This transformation has significantly reshaped people's lives, making them more practical, efficient, and productive[1]. As a German legal scholar, Friedrich Carl von Savigny, stated, "*Das recht wird nicht gemacht, es ist und wird mit dem volke,*" meaning that the law is not created but grows and evolves with society[2]. As a nation governed by law, this presents a challenge for Indonesia to align its legal framework with these boundless technological advancements without deviating from the 1945 Constitution of the Republic of Indonesia (UUD NRI, 1945).

One prominent example of the widespread adoption of technology and information is financial technology (fintech). This innovation has driven the digitization of conventional financial systems, transitioning from paper money to fully digital platforms accessible via smartphones. Fintech enables financial activities such as payment systems and online trading to be conducted efficiently and in real-time, anytime and anywhere. The effectiveness and convenience offered by fintech have garnered significant public interest, as reflected in the remarkable growth of electronic money transactions, which surged by 172.85% year-on-year in January 2020. [3]This study focuses on two main aspects: (1) the collaboration between banking institutions and

[1] Muhammad Rifqi Suhaidi, "Peran dan Pengaruh Revolusi Industri 4.0 Terhadap Penerapan Omnibus Law Sebagai Perkembangan Sistem Hukum di Indonesia", Journal of Law, Administration, and Social Science, Vol. 3, No. 1, (2023): 15.

[2] Magister Ilmu Hukum Pascasarjana Universitas Medan Area, "Het Recht Hink Achter De Feiten Aan". https://mh.uma.ac.id/het-recht-hink-achter-de-feiten-aan/, diakses pada 26 Februari 2024.

[3] Giri Hartono, "BI Catat Penggunaan Uang Elektronik Tumbuh 172,85%", https://economy.okezone.com/read/2020/02/20/320/2171484/bi-catat-penggunaan-uang-elektronik-tumbuh-172-85, diakses pada 26 Februari 2024.

fintech companies and (2) the role of the Financial Services Authority (OJK) in supervising digital banking operations. The research finds that integrating banking services with fintech platforms enhances customer accessibility. At the same time, OJK employs advanced supervisory mechanisms such as OSIDA (OJK Suptech Integrated Data Analytics) and a regulatory sandbox to ensure innovation aligns with regulatory standards.

The adoption of financial technology (fintech) has grown rapidly, particularly during the COVID-19 pandemic, as societies sought to reduce the risk of virus transmission. Responding to this, the World Health Organization (WHO) recommended minimizing cash transactions and embracing contactless payment systems, leading to the emergence of a cashless society. [4]This transition underscores the crucial role of fintech as a secure, efficient, and legally regulated tool for financial transactions. Regulatory frameworks provided by Bank Indonesia, including Regulation Number 18/40/PBI/2016 on Payment Transaction Processing, Circular Letter Number 18/22/DKSP on Digital Financial Services, and Regulation Number 18/17/PBI/2016 on Electronic Money, alongside the Financial Services Authority's POJK Number 13/POJK.02/2018 concerning Digital Financial Innovation, ensure the lawful and reliable implementation of fintech in Indonesia.

Within this framework, digital transformation in the banking sector has materialized through digital banking services. As stipulated in Financial Services Authority Regulation Number 12/POJK.03/2021, digital banking refers to legally recognized banking institutions that operate exclusively online, except for a central head office. Digital banks offer services similar to conventional banks, such as fund collection, money transfers, and transaction processing. However, their distinctiveness lies in the flexibility and efficiency of operations, allowing customers to conduct transactions independently, in real-time, and from any location without visiting physical branches.

Digital banking further expands its functionality by integrating with e-commerce platforms. It enables customers to top up electronic wallets, make cashless payments through the standardized QRIS system, and access detailed transaction histories to track income and expenses. These features provide unparalleled convenience while maintaining robust security and operational efficiency. Additionally, adopting digital banking enhances customer experiences and aligns with global financial practices. This evolution reflects technological progress and emphasizes the critical importance of a rigid and comprehensive legal framework to support sustainable growth in the digital financial ecosystem.

The emergence of digital banks as a key form of financial technology has fundamentally reshaped the way banking services are provided and consumed, shifting from traditional face-to-face interactions to fully digital platforms. This development underscores a significant collaboration between the banking sector and financial technology (fintech), opening the door to innovative approaches to delivering financial services[5]. Through smartphone applications, digital banks offer broader access and enhanced customer convenience, extending financial inclusion to previously underserved populations. However, while digitalising financial services provides unprecedented ease, it also introduces various risks, such as transaction failures, data breaches, and privacy concerns. These challenges necessitate a robust operational framework to safeguard customer interests and ensure the integrity of digital banking systems.

Given these risks, the Financial Services Authority (OJK) plays a pivotal role in regulating and supervising digital banking activities. As the regulatory body overseeing financial institutions, including banks, the OJK ensures compliance with legal standards and promotes digital financial systems' secure and efficient operation. At its core, financial technology integrates technology into financial activities through remote digital systems, making transactions faster, easier, and more efficient. The transition from cash-based to online financial transactions marks a significant milestone in the evolution of the financial industry.

Fintech's versatility is evident in its various applications, including electronic money, which can exist as chip-based cards or server-based electronic wallets, such as Gopay, ShopeePay, Dana, OVO, LinkAja, and others. In the banking sector, fintech is exemplified by digital banking services, which facilitate seamless transactions, including payments, money transfers, peer-to-peer lending (P2P), crowdfunding, online loans, investment management, and digital identity verification. These features streamline financial processes and redefine the customer experience in financial services.

Despite its benefits, integrating digital banking and fintech requires addressing critical vulnerabilities in operational systems to prevent customer losses and maintain trust. Enhancing system reliability, ensuring robust data security, and complying with regulatory frameworks are essential to mitigating risks associated with digital financial services. The OJK,

[4] Elshabyta Auditya Bintarto, "Fintech dan Cashless Society: Sebuah Revolusi Mendongkrak Ekonomi Kerakyatan", Call For Essays, Universitas Gajah Mada, 9.

[5] Hida Hiyanti, "Peluang dan Tantangan Fintech (Financial Technology) Syariah di Indonesia", Jurnal Ilmiah Ekonomi Islam, Vol. 5, No. 03, (2019): 327.

through its regulatory and supervisory functions, is instrumental in fostering innovation while ensuring that digital banking aligns with legal, ethical, and security standards, thereby supporting a sustainable and resilient financial ecosystem.

Banks are financial institutions trusted by the public as intermediary institutions where they collect public funds and channel them back to the real sector for the development and stability of the country's economy. [6]Banking regulations are regulated in Law Number 10 of 1998, an amendment to Law Number 7 of 1992 concerning Banking. The development of financial technology in the banking industry is with the existence of digital banks. According to POJK No. 12/POJK.03/2021 concerning General Banks in article 1 number 22, "Digital Bank is a BHI Bank that provides and carries out business activities mainly through electronic channels without physical offices other than KP or using limited physical offices." The article explains that digital banking activities are carried out electronically. Then, according to POJK No. 12/POJK.03/2018 in article 1 number 4, "Digital Banking Services are Electronic Banking Services that are developed by optimizing the use of customer data in order to serve customers faster, easier, and according to their needs (customer experience), and can be carried out independently by customers, by paying attention to security aspects. " The article explains that the services provided by digital banks can be carried out independently by customers to be more effective and efficient. Digital banks provide financial services like general banks, such as saving money, transferring funds, loans and other services. Where what distinguishes them from conventional banks, in general, is that these services can be accessed independently by customers through the platform provided. Digital banks also still have banking functions, like conventional banks, namely the intermediary function, the intermediary party that brings together the party that owns the funds and the party that needs the funds.[7]

The Financial Services Authority is an independent institution that has the function of regulating and supervising the activities of the financial services sector including banking, capital markets, insurance, pension funds, financing institutions and other financial services institutions. This is marked by the enactment of Law Number 21 of 2011 concerning the Financial Services Authority. The Financial Services Authority has authority over financial services institutions in terms of supervision, investigation, consumer protection in the financial services sector, and other actions related to financial services sector institutions[8]. In the digital era, the Financial Services Authority also has regulations related specifically to digital banking services, which can be seen in POJK Number 12 / POJK.03 / 2018 concerning the Implementation of Digital Banking by Commercial Banks, Financial Services Authority Regulation (POJK) Number 12 / POJK.03 / 2021 concerning Commercial Banks, and other regulations.

Based on the background of the problem, this study aims to identify the problem, namely, How is Bank Cooperation with Financial Technology? and What is the role of the Financial Services Authority (OJK) in regulating and supervising digital banking activities to ensure the stability of the financial system, consumer protection, and compliance with applicable regulations? Hopefully, this research can be useful for increasing insight and knowledge for the banking industry, financial regulators, and the general public.

II. RESEARCH METHODS

Research is one way to produce developments in the field of science theoretically and practically with the aim of further deepening and broadening the understanding of the existence of science. [9]To conduct research, a research methodology is needed. Namely, the thinking used in research, techniques in science, and procedures in conducting research. Therefore, it can be said that the method is an absolute thing in research.[10]

Based on the background of the problem above, the approach taken in this study is the normative legal approach method. Normative legal research focuses on laws and regulations that have a close relationship with libraries, so it can be said to be library research or literature studies. [11]This is because literature studies use secondary data. The secondary data material is divided into primary legal materials, secondary legal materials, and tertiary legal materials. Primary legal materials are legal materials that come from positive law, namely from laws and regulations, where this study will review several Bank Indonesia Regulations and also Financial Services Authority Regulations. Secondary legal materials come from studies or literature such as

[6] Lukman Santoso AZ, Hukum dan Kewajiban Nasabah Bank. (Yogyakarta: Penerbit Pustaka Yustisia, 2011),13.
[7] Ditjen Perbendaharaan Direktorat PKN, “ODADING Seri Keuangan Digital Part III : Digital Banking”, https://djpb.kemenkeu.go.id/direktorat/pkn/id/odading/2919-digital-banking.html. Diakses pada 26 Februari 2024.
[8] Hesty D Lestari, “Otoritas Jasa Keuangan: Sistem Baru Dalam Pengaturan Dan Pengawasan Dalam Sektor Jasa Keuangan”, Jurnal Dinamika Hukum, Vol. 12, No. 3, (September 2012): 558.
[9] Soerjono Soekanto, Pengantar Penelitian Hukum, (Jakarta: Penerbit Universitas Indonesia (UI Press), 2018), 3.
[10] Ibid., 5-7.
[11] Suteki, Metodologi Penelitian Hukum (Filsafat, Teori, dan Praktik), (Depok : Rajawali Pers, 2018), 152-153.

books, articles, legal theories, and scientific works made by scholars. Tertiary legal materials support finding out the meaning or terms of primary and secondary legal materials that can be obtained from dictionaries or encyclopedias.

The data collection method for this normative legal research is the Library study method, namely by studying literature or legal materials collected previously, namely laws and regulations and books or scientific works. The data analysis method used in this study is qualitative, namely an analysis method that describes its research using sentences, words, descriptions, and narratives without using numbers. Then, the research specifications in this study are analytical descriptive, namely it will describe in full the phenomena or legal issues discussed in this study, which will be presented systematically and logically.

III. LITERATURE REVIEW

The digital era has brought transformative changes across industries, including the banking sector, where technological advancements have reshaped traditional banking operations into more innovative and customer-centric systems. This transformation is marked by the collaboration between banks and financial technology (fintech), revolutionizing financial services by enhancing accessibility, efficiency, and inclusivity. As the banking industry embraces digitalization, regulatory bodies such as the Financial Services Authority (OJK) play a critical role in ensuring these innovations align with legal frameworks and maintain financial system stability.

a. Collaboration Between Banks and Financial Technology

The synergy between banks and fintech has opened opportunities for innovation in delivering financial services. Fintech is defined as integrating technology into financial services to provide more efficient, accessible, and tailored solutions to consumers. This includes services like electronic money, peer-to-peer lending (P2P), crowdfunding, digital wallets, and online payments. Studies indicate that fintech partnerships enable banks to expand their services beyond physical branches, thereby increasing financial inclusion, particularly for underserved populations. Banks can enhance customer experiences, reduce operational costs, and improve transaction speed and accuracy through digital platforms.

However, this collaboration is challenging. Data security, system vulnerabilities, and regulatory compliance present significant risks. According to Karjoko et al., robust operational systems and effective governance are essential to mitigate these risks and ensure the sustainability of digital banking services.[12]

b. Risks and Challenges in Digital Banking

Digital banking introduces vulnerabilities such as transaction failures, cybersecurity threats, and data privacy breaches, which can undermine customer trust. The rapid evolution of technology requires continuous improvement in system resilience and security measures. Tandelilin highlights the need for banks to invest in advanced cybersecurity technologies and adopt stringent risk management practices to safeguard customer assets and information.

Moreover, shifting to digital banking necessitates reevaluating traditional banking models to address operational and compliance challenges. Fintech’s disruptive nature often exposes gaps in regulatory frameworks, which must be bridged to foster innovation while protecting consumer interests.

c. Role of the Financial Services Authority (OJK)

The OJK plays a pivotal role in regulating and supervising digital banking operations in Indonesia. Its mandate includes ensuring that banks and fintech entities comply with applicable laws, maintain financial stability, and prioritize consumer protection. The OJK employs innovative supervisory tools such as OSIDA (OJK Suptech Integrated Data Analytics) to monitor financial activities effectively.[13]Additionally, the regulatory sandbox framework provides a controlled environment for fintech innovations to be tested and evaluated before full-scale implementation, ensuring they meet regulatory and operational standards[14].

Regarding consumer protection, the OJK emphasizes transparency and accountability in digital banking services. It ensures that banks and fintech platforms operate with clear terms of service, robust data protection measures, and efficient mechanisms for addressing customer grievances. These efforts aim to balance innovation with regulatory compliance and build public trust in digital financial systems.[15]

[12] Karjoko, L., et al. “Legal Protection for Financial Consumers in the Digital Era.” Journal of Legal Studies, vol. 29, no. 3, 2021, pp. 215–229.

[13] Otoritas Jasa Keuangan (OJK). “OSIDA: A New Paradigm in Financial Supervision.” OJK Bulletin, 2023.

[14] Financial Services Authority Regulation Number 13/POJK.02/2018 on Digital Financial Innovation in the Financial Services Sector.

[15] Bank Indonesia Regulation Number 18/17/PBI/2016 on Electronic Money.

IV. DISCUSSIONS

A. Synergy Between Banks and Fintech: Driving Innovation in Digital Financial Services

Technology and Information continue to develop along with the times. People's lifestyles are inseparable from the use of technology, likewise, in the financial sector, which is the main activity of society. The development of digital technology has entered the world of payment systems or financial products known as financial technology. Financial technology transforms from a conventional financial system accommodated by technology to being all digital with a long-distance system. With financial technology, financial activities can be accessed via smartphones and the internet so that people do not need to carry large amounts of cash. The services provided by financial technology are affordable, easy, and faster financial activities so that financial activities can be effective and efficient.

With the ease of transacting using financial technology, banks have the potential to collaborate with financial technology. According to Article 1, paragraph 2 of Law Number 10 of 1998 concerning Banking, "A bank is a business entity that collects funds from the public in the form of savings and distributes them to the public in the form of credit and other forms in order to improve the standard of living of the people". The public can use financial services in banking, such as making deposits or savings, transferring money, making loans or credit, as a tool or transaction system. With the existence of financial technology, it can be good potential for banks to cooperate or collaborate in the financial sector.

Based on a survey conducted by IDC's Digital Transformation in Banking in 2016 regarding how banks perceive financial technology globally, as many as 34.2% of banks consider financial technology an opportunity to collaborate or cooperate with banks in their business activities. Bank cooperation with financial technology can provide many benefits for banking business activities; in digitalization, financial technology can provide innovative solutions. Financial technology can also improve the quality of services banks provide, conduct deeper analyses related to prospective bank customers, and increase risk mitigation if something unexpected happens. Financial technology can make banking services more efficient and can increase the types of financial service products for customers.[16]

Banking and financial technology cooperation is usually done by integrating banking services with financial technology. Therefore, customers can access various financial technology services through existing platforms. An example of this cooperation can be seen in the Peer Peer Lending (P2P lending) service, namely the lending and borrowing service by the People's Credit Agency or BPR. The parties involved in this cooperation are the People's Credit Agency (BPR) and financial technology lending. Of course, these parties must comply with the provisions and permits imposed by the Financial Services Authority. Cooperation between these parties can be divided into two types: channelling and referral. Channelling cooperates BPR and fintech lending by channelling loan funds or credit to customers through the fintech lending platform. Then, a referral is channelling credit by BPR directly, which is referenced by fintech lending. Cooperation between BPR and fintech lending can be done if the Financial Services Authority supervisor has approved it. Of course, the cooperation between BPR and fintech lending is also based on related regulations, namely Law Number 10 of 1998, which is an amendment to Law Number 7 of 1992 concerning banking, POJK No.12/POJK.03/2016 concerning Business Activities and BPR Office Network Areas Based on Core Capital, POJK No.77/POJK.01/2016 concerning Information Technology-Based Money Lending Services, and so on.[17]

B. The Role of the Financial Services Authority in the Form of Digital Bank Supervision

Banks are financial institutions trusted by the public as intermediary institutions that collect funds from the public and channel them back to the public in different forms as regulated in Law Number 10 of 1998, which is an amendment to Law Number 7 of 1992 concerning Banking. Banks provide services or services related to the circulation of money and payment traffic, including credit cards, safe deposit boxes, collections, custodians, clearing, bank guarantees, and letters of credit in international and domestic trade[18]. Supported by financial technology that accommodates the conventional financial system to be completely digital, namely with the existence of digital banks or digital banking. The regulations underlie digital banking, namely the Financial Services Authority have regulations related to digital banking, namely the Financial Services Authority Regulation (POJK) Number 12 / POJK.03 / 2021 concerning Commercial Banks. Financial Services Authority Regulation (POJK) Number 12 / POJK.03 / 2018 concerning implementing Digital Banking by Commercial Banks. Digital banks offer banking financial services

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[16] Departemen Penelitian dan Pengaturan Perbankan OJK 2021, “Panduan Kerjasama BPR dan Fintech Lending”, https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Buku-Panduan-Kerjasama-Bank-Perkreditan-Rakyat-(BPR)-dengan-Lembaga-Layanan-Pinjam-Meminjam-Berbasis-Teknologi-Informasi/Buku%20-Panduan%20Kerjasama%20BPR%20dengan%20Fintech%20P2P%20Lending.pdf Diakses Pada 29 Februari 2024.

[17] Ibid.

[18] Hermansyah, Hukum Perbankan Nasional, (Jakarta: Kencana Prenada Media Group, 2020), 65.

through electronic networks independently by customers anywhere, anytime, in real-time so that they can offer faster, easier, more effective and efficient financial services for customers.

However, the ease of digital transactions does not rule out the possibility of risks caused by system problems that can cause losses for customers using digital banking services. This can include customer data security, dependence on technology where there are obstacles in the system or network disruptions that can hinder customer financial activities, which can cause the risk of transaction failure or customer balance retention, and other problems. This can affect customer confidence in using financial services from digital banks. Therefore, there needs to be supervision for the ongoing digital banking services to minimize losses for digital bank customers.

By Law Number 21 of 2011 concerning the Financial Services Authority, article 5, the Financial Services Authority has the authority to regulate and supervise the implementation of business activities in the financial services sector, one of which is banks. The function of regulating and supervising banks by the Financial Services Authority is to maximize the performance of banking business activities as financial institutions trusted by the public, namely by collecting and distributing public funds. It can encourage the creation of financial system stability. [19]The Financial Services Authority can supervise the running of banking services through direct supervision (on-site supervision) and indirect supervision (off-site supervision). Direct supervision (on-site supervision) is bank supervision carried out by conducting general and specific examinations. The examination aims to obtain an overview of the bank's financial condition. With the examination, it can also determine the bank's level of compliance with applicable regulations in carrying out its business activities. It can find out if unhealthy practices can endanger the sustainability of banking business activities. Then, indirect supervision or off-site supervision is bank supervision carried out through tools to carry out monitoring, which can be in the form of reports made periodically by the bank, the existence of examination result reports, and other information that can be submitted to the Financial Services Authority.[20]

Supervision carried out by the Financial Services Authority on technology-based banking is carried out with the existence of regulations that regulate and supervise digital banking, namely in the Financial Services Authority Regulation (POJK) Number 12 / POJK.03 / 2021 concerning Commercial Banks and the Financial Services Authority Regulation (POJK) Number 12 / POJK.03 / 2018 concerning the Implementation of Digital Banking by Commercial Banks. This supervision can be started from the registration stage by the registrant to the supervisor, ensuring that the digital financial services sector has been registered. Then, the regulator will test the regulatory sandbox, namely the stages carried out by the Financial Services Authority by conducting tests on the digital financial services sector, namely in terms of governance aspects in the financial services sector business activities, how the business model and business processes are by the financial services sector, and the financial instruments of the organizers. This has been regulated in the Financial Services Authority Regulation Number 13 / POJK.02 / 2018 concerning Digital Financial Innovation in the Financial Services Sector. The Financial Services Authority also has regulations for the technology-based financial services sector or financial technology in the field of lending or Peer Peer Lending, namely in the Financial Services Authority Regulation (POJK) Number 77 / POJK.01 / 2016 concerning Information Technology-Based Money Lending Services which regulates licensing and supervision. The supervision is carried out in two stages, namely, the pre-operational business stage related to the registration and licensing of the organizer. Then the next supervision is the stage during business operations, namely the submission of company reports and the examination of reports by the Financial Services Authority.

Quoting from Press Release SP 13 / DHMS / OJK / III / 2022, along with the development of technology, the Financial Services Authority is developing the Financial Services Industry or (IJK) supervision technology by issuing OSIDA, namely OJK Suptech Integrated Data Analytic which has the function of maximizing and optimizing the data analysis process in the Financial Services Industry report. According to the Chief Executive of Banking Supervision of OJK, the implementation of banking supervision is currently different from before; OSIDA (OJK Suptech Integrated Data Analytic) shows that supervision in the banking industry also continues to move to adapt to developments in the era, especially in the use of technology considering the transformation of banking into digital, namely with the existence of digital banks or digital banking which produces very large data so that the use of technology is needed to optimize analysis and supervision of the data. The existence of OSIDA (OJK Suptech Integrated Data Analytic) can help the Financial Services Authority carry out supervision and take anticipatory steps. This is supported by technology that can be done with OSIDA (OJK Suptech Integrated Data Analytic) which can detect early warning signals and

[19] Fadhil Irfan Muhammad, "Peran Pengawasan Otoritas Jasa Keuangan dalam Rangka Pengembangan Bank Perkreditan Rakyat", Universitas Brawijaya Malang, 7.

[20] OJK, "Pengaturan dan Pengawasan Perbankan", OJK 2017, https://ojk.go.id/id/kanal/perbankan/ikhtisar-perbankan/Pages/Peraturan-dan-Pengawasan-Perbankan.aspx Diakses Pada 28 Februari 2024.

compliance checks. This is an early indication of weaknesses in governance. These weaknesses can occur in banking business activities, which can be in the form of potential fraud, data manipulation, or if there is non-compliance with applicable regulations or provisions.[21]

V. CONCLUSION

With the ease of transacting using financial technology, banks have the potential to collaborate with financial technology that can provide many benefits for banking business activities; namely, in facing digitalization, financial technology can provide innovative solutions. Financial technology can also improve the quality of services banks provide, conduct deeper analyses related to prospective customers, and increase risk mitigation if something unexpected happens. The cooperation between banking and fintech is usually carried out by integrating banking services with financial technology. An example of this cooperation can be seen in the Peer Peer Lending (P2P lending) service by BPR with financial technology lending in cooperation with channelling and referrals.

The role of the Financial Services Authority in the form of digital bank supervision is through direct supervision or on-site supervision and indirect supervision or off-site supervision. Direct supervision or on-site supervision is a special and general examination of banking business activities to determine the condition of the bank's business activities. Indirect supervision or off-site supervision is monitoring through periodic reports. The Financial Services Authority's supervision of digital banks is also implemented in the regulatory sandbox, namely testing in the digital financial services sector related to aspects of governance in financial services sector business activities regulated in Number 13/POJK.02/2018 concerning Digital Financial Innovation in the Financial Services Sector. The Financial Services Authority is developing the Financial Services Industry or (IJK) supervision technology by issuing OSIDA, namely OJK Suptech Integrated Data Analytic, which aims to optimize and facilitate processing in data analysis supervision.

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