PERSPECTIVES IN FINANCE

Volume - 1

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Foreword

"**Perspective in Finance**" is a well-articulated book to handle global finance and accounting related topical issues that would span investment decision-making, financial management, portfolio management, capital and money markets, public finance, mortgages and loans, corporate finance, audits, taxation and insurance, just to mention some.

The book, which is the first of its kind, became necessary to abridge the yawning research gaps in the mentioned areas and as an outcome of the success story and the wide encomiums and accolades received on its fore-runner in the stable of AkiNiks Publications series; the Research Trends in Management: Recent Trends, Opportunities and Challenges.

To say the least, **Perspective in Finance** is a Book of Readings intended to project topics of contemporary nature, sourced and written by authors across global finance and accounting frontiers. This particular edition attracted authors from Asia and Africa, whose research contributions were on goods and services tax, corporate financing, audit failures, financial technology development and financial inclusion with experiences from India, Indonesia and Nigeria, all of which are emerging economies.

Perspectives in Finance is indeed devoid of unnecessary verbosity but rather compact and concise, yet diversified in terms of content and spread as well as obviously very handy. This book would be a delight to the reader and is recommended to a wide spectrum of persons: lecturers and students of finance and accounting; financial decision makers, whether in private or public sector; and researchers with interests in wide cross-sectional and geographical boundaries particularly in finance, accounting, economics and management and across developed and developing countries.

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Chapter - 4

The Impact of Financial Technology Development and the Indonesian Government Regulation

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Abstract

This study wants to see the need for modern financial services that emerge through financial technology (*fintech*) as an opportunity and challenge. Besides that, the impact of the presence of financial technology or fintech phenomena in Indonesia is also to be reviewed. The method used in this study is a qualitative study, through discussion and information directly from informants by interviewing various parties involved. Also carried out a literature review from various library sources, especially from the Financial Services Authority (OJK), Bank Indonesia and Bank Mandiri. Disruption of innovation in the financial services industry cannot be avoided by banking players. The development of fintech in Indonesia is still in its early stages, many enterprises have not been touched, and many opportunities have not been explored maximally. Collaboration is needed to jointly develop fintech in Indonesia, both by incumbent players, new fintech players and regulators for mutual benefit.

Keywords: financial technology (fintech), disruptive innovation, financial services, financial services authority (OJK), bank Indonesia, conventional banking

1. Introduction

Today's society is experiencing significant changes in patterns and lifestyles. Through technological advancements with the massive penetration of the internet, people can instantly connect. This changes the way people communicate, work, and transact spending their income. In Indonesia, the public has become acquainted with online shopping activities, or often referred to as e-commerce. With the possibility that consumers can get the needs of goods and services instantly, the need arises to access financial services. Expectations of access to financial services that are more affordable, fast, and easy, as well as personally connected with various activities in cyberspace have become demands that need to be answered by modern financial service providers.

When compared to the current market competition in modern times, technology has a very high share. Companies that have a high level of establishment and feel they are leading the industry, sometimes have too much self-confidence to close their eyes or underestimate the innovations made by competitors or newcomers. The emergence of new technologies is sometimes liked and accepted by consumers so that they can replace the previous technology. This is what causes how the innovation that succeeds and is easier can be regarded as a disruptive innovation. (Hamid, 2017)

The global financial crisis that occurred in 2008 has rocked the level of public confidence in the formal financial system. The events caused a response from the authorities by tightening the regime of regulating financial institutions. The combination of the two then created a wide financing gap. Amid these conditions, was born the Financial Technology company (FinTech or fintech in subsequent writing) as an alternative solution to meet the public's need for financial services. With creative ideas and technological innovations, fintech offers new choices for consumers in conducting payment activities, money transfer, fund intermediation, and investment. Fintech is the maximum use of technology in improving financial services. Fintech is built by startup companies that provide convenience in transactions, especially financial transactions. This phenomenon challenges conventional companies that are still lacking in the use of technology.

The growth of fintech has been very rapid in recent years, coupled with the era of the millennial generation that has grown up, making it a very potential market. This generation of "technology literacy" is also a little reluctant to deal with the stiffness that might be felt from formal financial institutions, thus further encouraging the growth of fintech. With a breakthrough by Fintech, activities that may have been unthinkable for consumers a decade ago, now can be done. Examples are sufficient payments made via smartphones, accessing financing via online sites with peer to peer lending or crowdfunding schemes, and even getting investment recommendations automatically via artificial intelligence.

The use of fintech by startup companies has increased very rapidly from 2014 to 2015, can be seen in Figure 1 below. This shows the existence of a technology system that provides services with more advantages compared to existing systems.

Fig 1: Development of Fintech in Indonesia

Source: Indonesian Fintech Association (https://fintech.id/)

Fintech comes with various types of business services, including Payment Channel System, Peer to Peer (P2P) Lending, Crowdfunding, and others. The most dominant fintech business actor in Indonesia today is the type of payment. The payment system is an electronic service that replaces currency and demand deposits as a means of payment, for example, e-money and bitcoin cards. The fintech phenomenon that is present in Indonesia is a warning to current institutions, including the financial sector towards future employment prospects. Fintech provides convenience services and lower prices compared to existing agency services. This is also accompanied by the era of the millennial generation who are quick to accept change.

Reflecting on the case that occurred at Jibun Bank Japan, it is one form of disruptive innovation towards conventional banking institutions. Jibun Bank is one of the banks that operate online due to disruptive changes from technology. In 2015, Jibun Bank became the best bank with a total of 1.9 million active customers. The activities of Jibun Bank consist of e-money refill transactions, wallets, and transfers to fellow Jibun Bank users. This needs to be watched out by banking institutions in Indonesia because many things will happen with the development of this fintech technology.

This study wanted to see the need for modern financial services that emerged through fintech, as an opportunity as well as a challenge. Also, it will be seen the impact of the presence of fintech phenomena in Indonesia for actors such as regulators, banks and startup companies that manage fintech.

2. Methodology

This study uses a qualitative method, where the concept constructs data found in scattered conditions into a theme that is more meaningful and easier to understand. The intended purpose is the value behind visible data so that qualitative research does not focus on generalizations but rather on meaning. Primary data is obtained through information directly from informants by discussions and interview method. While secondary data is through a literature review of journals and articles related to research topics. (Sugiyono, 2011)

Discussions were held at fintech seminars, and interviews were conducted with the Financial Services Authority (*OJK*) at Financial Technology Development Division. The interviews were also conducted with banks, Bank Mandiri (*Mandiri Bank*) and the National Pension Savings Bank (*BTPN*), as well as startup company Fintech, Xfers. Secondary data is obtained through a literature review of journals that have been published in various portals relating to research topics, and also through official OJK websites, Bank Indonesia (Central Bank of Indonesia), Bank Mandiri, and others.

3. Disruptive Innovation

Technology is an absorption word that comes from English, namely "technology." Technology is also believed to come from the Greek "technology" which means art discourse. According to Bernard Stiegler, as quoted by Lisa (2009), technology is defined as "the pursuit of life in ways other than life, and as organized by an inorganic material." At present technological advances, 4.0 make various parties innovate to facilitate everything, resulting in disruptive in various fields of life.

Disruptive innovation is an innovation that successfully transforms an existing system or market, by introducing practicality, ease of access, convenience, and economic costs. This term was made the first time by Clayton M. Christensen and Joseph Bower in 1995. "Disruptive Technologies: Catching the Wave," Harvard Business Review (1995). This Disruptive Innovation usually takes certain market segments that are less desirable or deemed less important for market authorities, but their innovations are breakthrough and can redefine existing systems or markets. The emergence of Disruptive Innovation, if it is not well anticipated by the business world can cause a fall. (Hadad, 2017)

The digital revolution changed the face of all industries throughout the country. Transformation takes place thoroughly in industrial production, management, and governance systems. Disruptive innovations have emerged, namely a variety of innovations that have succeeded in changing, changing or renewing business models, rules of the game, structure and competitive environment. The impact in the financial services sector is the fintech phenomenon. PricewaterhouseCoopers (PwC) in the report "Financial Service Technology 2020 on Beyond: Embracing Disruption", placed fintech as the top key theme. PwC revealed that fintech would direct the financial services industry to new business models. (Mahersi, 2017)

The phenomenon of Disruptive Innovation also occurs in the Financial Services Industry which has disrupted the landscape of the Financial Services Industry globally. Starting from the industrial structure, intermediation technology, to the marketing model to consumers. All of these changes have led to a new phenomenon called Financial Technology (Fintech). Hadad (2017) summed up some definitions of Fintech from several experts. Fitntech Weekly defines FinTech as a line of business based on software to provide financial services. Financial technology companies are generally startups founded with the purpose of disrupting incumbent financial systems and corporations that rely less on software. PwC explains FinTech is a dynamic segment of the financial services and technology sectors where technology is started and are currently being provided by the traditional financial services industry. Value-Stream defines FinTech technology that serves the clients of financial institutions, covering not only the office and also the front office that has been human-driven. Kantox-FX explains FinTech is a contraction of "finance" and "technology" - to companies that provide financial services through the engagement of technology.

Arner (2016) states that FinTech is referring to the use of technology to deliver financial solutions. The Oxford Dictionary defines Fintech as: "Computer programs and other technology used to support or enable banking and financial services.". Wikipedia says that: "Financial technology, also known as FinTech, is a line of business based on using software to provide financial services. "Financial technology companies are generally startups founded with the purpose of disrupting incumbent financial systems and corporations that rely on less software".

Catradiningrat (2017) defines fintech as an entity that combines technology with features of financial services, which results in changes in the order prevailing in financial markets (creative disruption). Fintech can be categorized into four types: Deposits, Lending, and Capital Raising, Market Provisioning; Payments, Clearing, & Settlement, and Investment and Risk Management. Iman (2016) summarizes the definition of fintech as the implementation and utilization of technology for improving banking and financial services. Generally done by startup companies, but not the same.

You are utilizing the latest software, internet, communication, and computing technology. "Destructive" (established) market/industry that has been created.

Fintech is an innovation in financial services. This innovation is a touch of modern technology that can bring financial transaction processes more comfortable and more practical. It first appeared in 2004 which is an economic model from Zopa in the United Kingdom, as a financial institution that operates as a money lending service. Next came the financial model introduced by Nakamoto in 2008. The initial concept of fintech development was related to the peer-to-peer concept application submitted by Napster in 1999 as music sharing.

Fintech manifests itself as the trend of the birth of companies that provide technology to facilitate financial services (startup) independently outside conventional financial institutions. Anyone who can innovate by creating a new application of technology-based financial services will immediately become a fintech player. The shift also occurs from bank driven to consumer driven, which opens up space for so many new players in the financial services sector. (Mahersi, 2017).

Bill Gates in 1994 states that in the future the banking industry will move towards virtual banking without the presence of banks physically. Communities can no longer be served with traditional financial industries because Banking is bound by strict rules and limitations of the banking industry in helping people in specific regions. So that the community seeks alternative funding in addition to traditional financial industry services. Cities need more democratic and transparent financing alternatives. The cost of efficient financial services and reaching the wider community. (Hadad, 2017).

Hadad, in a public lecture about Fintech in Jakarta, explained two things that were the reasons why technology development in the financial industry was a necessity, namely: First, there was a shift in economic consumer behavior towards digital services. In the last decade, it has begun to see a rapid increase in the use of technology such as computers, mobile phones, smartphones, and internet usage which has changed the behavior of customers conducting financial transactions. They need financial services through mobile and online technology. Their number continues to grow quite significantly. This is a big opportunity for the financial industry. (Hadad, 2017).

Hamid (2017) States: "The phenomenon of disruptive innovation also occurs in the financial industry which has disrupted the landscape of the financial industry globally. Starting from the industrial structure, intermediation technology, to the marketing model to consumers ". Moreover, according to the e-Marketer as quoted by the association, APJII (2016) said, "the number of internet users in Indonesia has reached the sixth largest in the world, becoming the main attraction for all business people who have gone public, even from year to year. Increase ". Santoso (2018) in his research stated that at this time the Indonesian people had used internet banking technology in their financial behavior. Bagas (2018) said in an interview: "Today's society is turning to use technology because there are four reasons: certainty, speed, comfort, and safety. So that the more innovating technology can disrupt business or previous market players ".

The digital revolution changes the face of all industries in all countries and covers all systems of the sector, from production systems, management to industrial governance. From these changes, disruptive innovation appears where innovations change, renew an existing structure. The same thing was said by Kasali (University of Indonesia), that the disruption of innovation is changing not only the "way" of doing business but getting to business fundamentals. (Kennedy, 2017).

The phenomenon of disruptive innovation occurs not without cause. Two things contribute to the emergence of disruptive innovations, namely: First, technological development influences the direction of change and innovation. Second, a high need for efficiency and effectiveness causes producers to need adequate innovation. The demand for energy is a substantial cause for how producers must innovate to compete with the market. (Hamid, 2017).

The development of technology that is equipped with speed, convenience, cheaper and safer makes the people turn to more up-to-date technology. This technology is an innovation, creative and can damage the existence of real changes. The emerging innovations disrupted governance to the old business model of market participants. Innovations that are said to be disruptive are limited in some scopes, namely: change brings new technologies that are cheaper and easier than existing technologies, innovations occur in the same industry, so that old industry players feel disturbed.

Now fintech is a world issue that absorbs the attention of economic actors, especially in the financial services industry. Until 2015, Silicon Valley Bank recorded more than the US $ 12 billion in investment volume in fintech in the world. (Mahersi, 2017)

4. Development of Fintech Indonesia [1]

As the country with the largest population in Southeast Asia and the fourth largest in the world, Indonesia is a big market for fintech. According to the Indonesian Fintech Association (IFA), the number of fintech players in Indonesia grew 78% in 2015-2016. Until November 2016, IFA recorded around 135 to 140 startup companies that were registered. The presence of fintech in Indonesia is reinforced by the growing momentum of the number of middle-class and affluent consumer (MAC), which is predicted by the Boston Consulting Group (BCG) to jump from 74 million in 2013 to 141 million by 2020. MAC is a community group that socio-economics will begin to use the money for household needs, vehicles and financial services, including

Fintech is welcomed by the government and regulators. President Joko Widodo hopes that fintech can play a role in facilitating micro-business financing and connecting business financing needs in various parts of the country, which are aimed at increasing financial inclusion. The government's great attention to the importance of strengthening financial integration can be understood because referring to the results of the National Literacy and Financial Inclusion Survey conducted by the Financial Services Authority (OJK) in 2016; it was found that the Financial Literacy Index was 29.66% and the Financial Inclusion Index was 67.82%. Brodjonegoro in Maharesi (2017) describes three development priorities that can be driven through the use of fintech. First, capital mobilization to increase economic activities of underserved communities, such as Low-Income Communities (MBR) and SMEs. Second, mobilization of funds in the city to fund basic infrastructures such as sanitation and electricity. Third, mobilizing funds to encourage sustainable infrastructure development, such as financing important innovations to increase agricultural and fisheries production.

From the regulator side, OJK views information technology as being used to develop the financial industry and can encourage the growth of alternative financing for the community. OJK also supports the growth of information technology-based financial services institutions so that they can contribute more to the national economy. For this reason, OJK has issued OJK Regulation No.77/POJK.01/2016 concerning Information Technology or Peer-to-Peer (P2P) Lending, which will be followed by other provisions

[1] Yogie Maharesi, *Fintech dan Transformasi Industri Keuangan,* Departemen Komunikasi dan Internasional Otoritas Jasa Keuangan, industry.co.id, 2 August 2017. http://www.pwc.com/id/en/media-centre/pwc-in-news/2017/indonesian/fintech-dan-transformasi-industri-keuangan.html

related to fintech so that the regulation becomes more precise and more complete. The amount of potential possessed makes fintech need to be given space to grow.

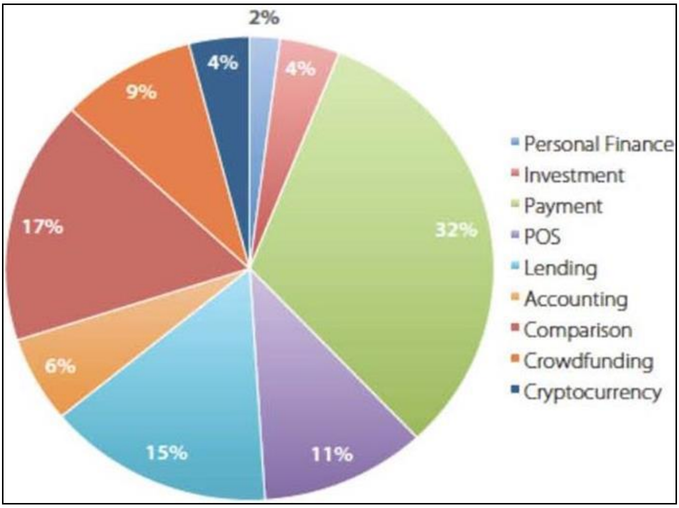

Fig 2: Fintech Distribution in Indonesia

Source: Fintech News Singapore (Iman, 2016)

The role of fintech in Indonesia according to Hadad is significant, which is to encourage even distribution of the level of welfare of the population, promote the ability to export MSMEs that are currently still low, help fulfill the huge domestic financing needs, increase national financial inclusion, and encourage the distribution of national financing not evenly distributed in 1700 islands. For this reason, there are four main categories of fintech developed, namely.

1) Payment, clearing, settlement
2) Deposits, lending, capital raising
3) Market provisioning
4) Investment & risk management

The share of Fintech activity in Indonesia in 2016 was dominated by 56% by the first group. Based on statistical data, in 2016 the value of Fintech transactions in Indonesia is estimated to have exceeded the USD 14.5 billion figure. Adequate arrangements need to be made given the risks that may be caused. Fintech will continue to develop and support the achievement of three targets in accordance with the 2015-2019 Indonesian Financial Services Sector Master Plan, namely: Contributive, optimizing the role of the

FSS in supporting the acceleration of national economic growth; Stable, maintaining financial system stability as the basis for sustainable development; Inclusive, open access to finance so that it can improve the welfare of the community. (Hadad, 2017).

5. Synergy in the Fintech Ecosystem

The financial industry must continue to innovate in developing technology, especially with the massive development of fintech as alternative financing outside conventional financial institutions. For this reason collaboration between the financial industry and startup companies needs to be encouraged. The partnership is a critical factor in creating fintech added value for the business growth of conventional financial institutions and startups. The important collaboration is related to the utilization of data owned by traditional financial institutions to develop solutions through fintech innovation with startup companies. Education and socialization of fintech products and services to the community is also fundamental to do. By collaborating, the expansion of the use of fintech for the wider community is increasingly valuable and has a significant impact on moving the economy down to the bottom. (Maharesi, 2017).

The synergy between stakeholders is needed to encourage the role of fintech in financial inclusion. The construction of the Financial Information Services (SLIK) System by the FSA can be a good momentum. But the requirements for fulfilling all customer information in SLIK can be a problem for fintech companies, especially start-ups that have a broad user base. Therefore this system also needs to ensure inclusion for non-bank fintech service providers. As a solution, fintech companies can be given the initial ease of SLIK integration within the deadline for meeting formal requirements after becoming a member of SLIK. Also, the ease of SLIK integration should also be given to private credit information bureaus or called the Credit Information Management Agency (LPIP) to provide more comprehensive credit information.

For this reason, OJK needs to synergize with BI, considering that LPIP is regulated by BI. The growth of LPIP needs to be encouraged because it will contribute to the World Bank's credit access indicators which will increase Indonesia's ranking internationally. (Kristy, 2017).

Hadad stated that to optimize the role of fintech in Indonesia, it is necessary to build a synergy of the fintech business with the Incumbents Industry (Banks and Non-Bank Financial Institutions). These efforts can be pursued in several forms, among others: First, the collaboration of information channels between FinTech and existing financial institutions by utilizing large customer data and distribution channels that have been built. The utilization of the FinTech function is expected to improve the bank's business efficiency and financial institutions; second, product collaboration is a solution for consumers.

For this reason, FinTech players together with banks and financial institutions need to carry out design thinking to make products that are beneficial to both parties. This synergy can be done by banks that do core business in MSMEs with FinTech which provides digital MSME platforms. (Hadad, 2017).

Financial inclusion and fintech contributions will be determined more by the role of the government, not only through formal regulatory support but also followed by the synergy of all relevant stakeholders to create an ecosystem that supports financial inclusion-not fragmentation. (Kristy, 2017).

6. The Role of the Financial Services Authority (OJK) [2]

By its authority stipulated in Law No.21/2011, OJK has prepared some rules to regulate and supervise the development of types of financial service sector businesses that use technological advancements or are called financial technology (Fintech). OJK formed a "Digital Economy and Finance Innovation Development Team" consisting of a combination of some work units at OJK to review and study the development of Fintech and prepare its development policies and regulations. Waluyanto stated, "OJK intensively continues to study the development of this Fintech phenomenon so that the OJK can guard this economic evolution to be able to support the development of the financial services industry going forward and continue to guarantee consumer protection," The presence of Fintech, for the OJK as an authority in the financial services industry, is an opportunity to continue to improve the development of the financial services sector, including encouraging financial inclusion programs. However, it is also a challenge for OJK to ensure the reliability, efficiency, and security of these online transactions so as not to harm consumers.

The Financial Services Authority has several plans to support the development of the fintech industry, including:

1. Launch of Fintech Innovation Hub as a center of development and become one-stop contact for national Fintech to connect and

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[2] Fithri Hadi, Siaran Pers: OJK Siapkan Aturan Pengembangan Financial Technology, SP 99/DKNS/OJK/10/2016, Jakarta 6 Oktober 2016, Direktorat Operasional dan Sarana Sistem Informasi OJK.

cooperate with institutions and institutions that are supporters of the digital financial ecosystem. The initiative aims to streamline coordination across ministries and agencies, develop the fintech industry that fits people's needs, develop new and potential fintech business models, and provide communication facilities between regulators and the fintech industry.

2. Setting up a CA (certificate authority) in the financial services sector as a follow-up agreement with KOMINFO. CA as the issuer of the certificate of a digital signature of a business service actor can guarantee that an electronic transaction digitally signed has been secured and has legal force by the provisions in Indonesia.
3. Issuance of Regulatory Sandbox for Fintech. This regulation regulates minimum matters so that Fintech's growth and development has a legal basis to attract investment, efficiency, protect the interests of consumers and grow sustainably.
4. Study on the implementation of data and information security standards in the management of the Fintech industry and the need for the Information Security Incident Reporting Center in the financial services industry.
5. Vulnerability Assessment (VA) Study Centralized in the financial services industry to ensure posture and maturity/readiness to handle information security are always maintained to reduce risks and threats to information security in the financial services industry

Provisional developments from a study conducted by OJK stated that the classification of Fintech companies included in OJK authorization could consist of various types of businesses such as banking, insurance, investment, financing, borrowing (peer to peer lending), crowdfunding, channeling credit and so on. "The Fintech company classification is outside of Fintech's business in the payment system that will be regulated by Bank Indonesia," while the scope of the regulation is being prepared in the fintech sector, while this is a rule in the fields of capital, business model rules, consumer protection rules, and regulations. Minimal risk management. At present OJK has issued the Financial Services Authority Regulation No.77/POJK.01/2016 concerning Information Technology-Based Money Lending and Borrowing Services.

7. The role of Bank Indonesia [3]

Bank Indonesia (Central Bank of Indonesia), by the State Law of the Republic of Indonesia assigned as the Payment System Authority, took several initiatives to ensure that the fintech growth trend could provide optimal benefits to the community, not create turmoil in the financial system, and always be supported by an adequate regulatory framework. This is also closely related to Bank Indonesia's duty to always maintain the effectiveness of monetary policy transmission and maintain financial system stability. Because the credibility of the entire financial system can be disrupted if public trust is not adequately maintained by fintech who conduct activities like banks or non-bank financial institutions.

Bank Indonesia continues to follow and explore the development of technological innovations in financial services offered by Fintech. With the rapid changes that occur, regulation should not precede innovation. But control needs to always be near innovation. While looking at various potential risks that arise, a conducive business climate needs to be realized. In this case, the establishment of the BI-FTO (BI Fintech Office) is an effort to maintain the level of playing field through a balanced and proportional regulatory regime without having to turn off the pace of innovation. As a task force positioned close to the industry, there are four main functions to be carried out by BI-FTO, namely:

1. As a catalyst/facilitator for the exchange of innovative ideas for developing Fintech in Indonesia
2. As business intelligence, where the BI-FTO will regularly provide updates through the dissemination of the results of studies and meetings, including with relevant ministries and authorities as well as international institutions
3. Assessment function. In this case, the BI-FTO will monitor and map the potential benefits and risks of the innovation of the business model and the products offered. The results of the assessment will be the basis for policy formulation at Bank Indonesia
4. The function of coordination and communication, which plays a role in providing an understanding of the existing regulatory

[3] Agus D.W. Martowardojo, Sambutan Gubernur Bank Indonesia dalam Launching Bank Indonesia Fintech Office, Jakarta, 14 November 2016.

framework, and encouraging harmonization of cross-authority regulations.

Along with the BI-FTO, it is expected that the fintech network ties with the authorities will be even tighter. By consistently increasing the knowledge base of the processes and functions carried out by fintech, BI-FTO will be able to contribute to creating a healthy fintech industry. As part of the assessment function carried out by the BI-FTO, an initiative was introduced called the Regulatory Sandbox. This initiative is analogous to a laboratory used jointly by Fintech actors and regulators to test business models and products/services before entering into the licensing regime in full. This test is carried out in a limited environment to ensure the identification and mitigation of all risks that may arise. These restrictions are given in the form of licensing limited to service, period, and area of operation. Through the Regulatory Sandbox, regulators can monitor the sustainability of fintech in a protected risk perimeter intensively. Apart from being used for evaluation, this will also provide space for regulators to take anticipatory and corrective steps at the right time if needed. Furthermore, data generated throughout the monitoring and mentoring process can be optimized to improve the quality of policy responses. Because amid the exponential growth trend, data has become a significant asset for regulators and industry players as a basis for decision making.

Bank Indonesia looks at the strength of technological innovation in the trading area. The growth and adoption of e-commerce by the Indonesian people are so extraordinary. The terminology of "market" as a meeting place for current sellers and buyers can be realized virtually. Although it no longer has to be done face-to-face physically, the need for transactions through the payment system remains an integral part of buying and selling activities. Therefore, Bank Indonesia considers it necessary to complete the provisions in the existing payment system area, in particular ending the provisions concerning Card-Based Payment Instruments (APMK), Electronic Money, and Fund Transfers that already existed.

The Bank Indonesia Regulation concerning the Implementation of Payment Transaction Processing (PBI No.18/40 /PBI/2016) is published as a manifestation of our commitment to four main things, namely.

1) Accommodating innovation
2) Improve security, including compliance with standards and periodic security audits
3) Maintain the level of playing field

4) Consumer protection, amid the threat of fraud and cybersecurity that are in competition with innovation

This provision regulates two main subjects in a payment transaction processing activity, namely: SP Service Provider, as the party responsible for the stages of Authorization, Clearing and Settlement. This party, namely the Switching, Payment Gateway, and Electronic Wallet (e-Wallet) organizers, is required to have a permit from BI; and Payment Transaction Support Providers, such as a card, ATM, EDC, and data center providers. In this case, the SP Service Provider needs to request cooperation approval and is responsible for ensuring the security and smoothness of the transaction processing facilitated by them.

To improve the resilience and competitiveness of the national payment system industry, this provision also regulates the ownership structure of payment system service providers. All of these arrangements are aligned with various initiatives across the Ministry and related authorities, especially with the e-Commerce Roadmap. The roadmap will be a comprehensive guideline for regulators and industry. Starting from the aspect of funding, the quality of human resources, up to issues of consumer protection and infrastructure is the focus of the discussion. Our thrifty publishing is very timely and on target to support the growth of e-commerce and also Fintech in Indonesia. Bank Indonesia supports the issuance of the e-Commerce Roadmap as the Volume XIV Economic Policy Package on November 10, 2016. This. This step is in line with the directives of the President of the Republic of Indonesia at the 27 September 2016 Limited Meeting regarding the Development of the Digital Economy. The President saw a remarkable digital economic progress, and directed all relevant agencies, including Bank Indonesia, to be able to support the development of the digital economy in Indonesia. Support needs to be given so that the Indonesian Youth Generation that prepares Start-Up companies and various initiatives in the field of digital economy can be helped. Bank Indonesia together with relevant ministries and authorities always support the development of the digital economy in Indonesia, including the business world, especially those of small and medium scale.

With collaboration and appropriate regulatory support, fintech actors can go hand in hand with traditional financial institutions that exist first. Adaptation by conventional financial institutions, as well as the joining of Fintech into a part of the financial system, we believe will encourage healthy competition and provide added value and alternatives for the community. The wave of innovation came unstoppable and created increasingly fierce competition. Only actors who have a robust and adaptive business model that can grow sustainably in the future. It is expected that collaboration between actors and authorities, and between authorities can be increasingly tight and productive so that the positive trends in the development of Fintech and e-Commerce in Indonesia can be maintained.

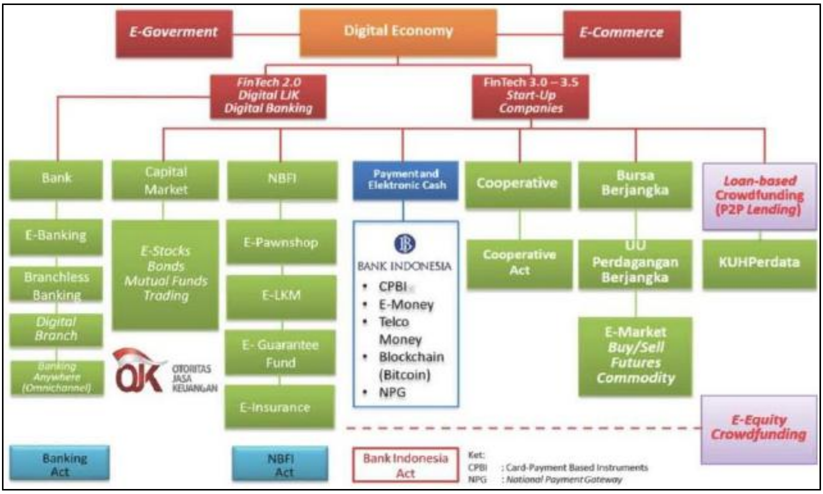

Fig 3: The Government of Indonesia's Digital Economic Vision

Source: Bank Indonesia (Central Bank) & the Financial Services Authority OJK (Iman, 2016)

All parties are expected to be able to guide the Start-Up Actors so that they are ready. Start-up players can sit together with the Regulator to discuss aspects of compliance with regulations from various Ministries and related authorities. All efforts are expected so that newly established businesses do not continue to be small businesses. Within a period of 10 to 15 years, these efforts can be a significant effort. Bank Indonesia, together with regulators, is committed to seeing the Indonesian Youth Generation rise and will be given the support and assistance needed. With synergies to improve efficiency, encourage inclusion, and develop innovation, the digital revolution is expected to be able to release all its real potential for a better and more prosperous Indonesian life.

8. Views of Various Parties against the Development of Fintech

The banking sector is one of the financial sub-sectors in Indonesia. Other sub-sectors are insurance, financing institutions, mutual funds, and other subsectors. According to Levine as quoted (Fabya, 2011) there are four stages of financial sector development when viewed from the sub-sector owned by the financial sector, namely: "The financial sector is beginning to develop, the banking sector has an increasingly important position in lending, the growing nonbank financial sector, and the growing stock market". According to Dendawijaya as quoted by Rahmadhani (2010), banks are an institution that has a function to connect two parties between those who have excessive funds and those who lack funds by collecting and channeling funds from the public to the community in the form of savings and credit to improve community welfare.

Innovation appears by offering new and creative ideas to occur in various industrial fields in Indonesia, one of which is in the financial services industry. Disruption of innovation in the financial services sector can be said from the emergence of financial technology or fintech. Even this disruption changes the basis of the relationship of individual ownership to a collaborative collective. The following will be presented in the results of the study in the form of interviews with fintech players, namely regulators, banks and fintech startups on the disruptive impact caused by the development of this financial technology.

The banking subsector is an innovation that can be damaged by technology, and there is a possibility that the presence of technology can disrupt banks. This is seen because fintech has a low cost and fast expansion. If the bank does not adopt or take action, then the virtual banking is likely to develop so that there is no real bank institution. Thus the workforce used by bank institutions will be replaced with fintech.

The Regulator's View of Fintech in Indonesia

The interview was conducted with Bagas Setiaji as a staff member of the Fintech Development Division of the Financial Services Authority (OJK). It is said that two important points must be known about fintech and banking in Indonesia. First, how is the attitude of the FSA towards fintech? Bagas said that currently with the presence of fintech in Indonesia, the OJK as the overseeing institution strongly supports the presence of these market players. The same thing mentioned by Hendrikus as Director of Regulations for Licensing and Supervision of Fintech OJK confirmed that the OJK strongly supported the presence of fintech. The second point from the results of interviews with Bagas was OJK's view of fintech and banking, with the emergence of fintech in the community, it could be a threat or also an opportunity for conventional banking.

However, the FSA sees that fintech works or does its operational activities must involve banks, while banks can work without affecting fintech. OJK sees conventional banking with fintech, each of which has its segment or has a different part. The bank has rules set by the government so that some people cannot be served by conventional banking. While fintech is present, many embrace nonbank people. In responding to fintech, OJK strongly supports its presence because seeing fintech can improve the welfare and economy of Indonesia. The presence of fintech can be more directed to SMEs that are difficult to reach by banks. This is evidenced by regulations issued by OJK regarding Peer to Peer Lending.

The Impact of Fintech on Banking in Indonesia

The author interviewed the National Pension Savings Bank (BTPN). BTPN is a bank that has a focus on serving low-income segments of society. Innovations in the field of financial technology are also carried out for people who make transactions with technology or digital who want convenience and speed so that a Jenius application emerges, namely a banking system innovation with the digitization process. Jenius is a banking service from BTPN which helps consumers regulate life finance.

The reason BTPN established this service is that every decision taken in life is always related to financial consequences, so BTPN is interested in helping consumers efficiently manage their financial lives through smartphones. BTPN is aware of and wants to be involved in addressing the fintech phenomenon. The reason that can be concluded is that the development of fintech cannot be underestimated but must be followed up so that it does not become a threat to banks.

The author also made an interview with Bank Mandiri to understand how technology was impacted on banks in Indonesia, such as Mandiri Bank which was being adapted to fintech.

Bank Mandiri (Mandiri Bank) was established on October 2, 1998, where there was a fusion between four state banks in July 1999, namely Bank Dagang Negara, the Indonesian Export-Import Bank, Bank Bumi Daya, and the Indonesian Development Bank to become Bank Mandiri. The presence of Fintech made by Bank Mandiri establishes a venture capital company PT. Mandiri Capital Indonesia (MCI).

Managing Director of MCI-Danusaputro said, "The disruption of fintech to banks is inevitable." Danusaputro told that their party had a reason in establishing MCI, namely: the trend is that conventional banking has been disrupted by fintech. Not only in Indonesia but also in Singapore, America, France. Citibank, DBS, and all kinds of banks, all are experiencing disruption from fintech startup. Especially for millennials, they think there are many other alternatives. Today's children feel that many other places to borrow money too. Peer to peer lending (lending and borrowing between individuals) can be an alternative to traditional banking. As for Bank Mandiri, as it was realized, the bank that there would be disruption and finally the strategy of Bank Mandiri was to establish Mandiri Capital, so that the innovation could be from within.

Bank Mandir recognizes the presence of fintech companies in Indonesia, I have my market share, and it is difficult to be a subsidiary. Danusututro views that fintech companies are somewhat tricky to become subsidiaries of Bank Mandiri, because startups that have a market share of about 5% to 20%, so Bank Mandiri remains a minority in startup companies that are. On the other hand, Bank Mandiri does not want to take a 51% or 80% stake in the company because Bank Mandiri intends to grow by itself. Bank Mandiri only wants to help by introducing customers and the Bank Mandiri network.

Also, Bank Mandiri collaborates with technology companies in the forms of investment in P2P lending called Amartha. Amartha is a startup company that is strong in microfinance, where it is two to three million per borrower. Collaboration in this regard, namely, Amartha's business model became an innovation with Bank Mandiri, by helping introduce Amartha's company to customers. The use of Bank Mandiri towards fintech Amartha in channeling SME loans (small and medium enterprises) can be still in the exploration stage. Danusaputro said: "Amartha is peer to peer lending so that it still receives money from the public as a retailer, but Amartha will not refuse if other institutions will channel, but the treatment will be different."

The View of Startup Fintech Owners

Also, the author also captured the opinion of one of the fintech startups, the Xfers Company, through Michael Harefa, Jason Roeroe, and Angel Merici as their founders. Xfers is a start-up company in the fintech field that works in the payment gateway segment. The appearance of Xfers in Indonesia began in February 2016. Xfers obtained investment from Indonesian investors on the condition that Xfers must open a branch in Indonesia. In May 2017, Xfers launched in Indonesia with a total of 10 founders from all over Indonesia.

The aim of establishing Xfers in Indonesia is to see a sizeable Indonesian population, and transactions using technology are increasing in Indonesia. With this opportunity, Xfers considers Indonesia as an asset in the growth of the Xfers Company. In Xfers' view, conventional banking is their current and future partner, possibly a competitor. Mamang is currently unable to move if there is no bank. This is because the current regulations do not allow fintech to have customers.

When fintech specifically payment gateways are given licenses to have customers by opening accounts, it is estimated that conventional banking will be disrupted. So that it can be concluded that fintech has the opportunity to disrupt traditional banks if regulations from the government allow Fintech to open its bank. Regarding changes to the law, Xfers as a fintech actor sees that he cannot guess whether there will be such regulation so that fintech can become a competitor of conventional banking. According to Jason, "logically, the easier it is, the more people will use it so that the regulation will follow that."

9. Conclusion

Innovations always disrupt incumbent market players. The disruption of change can have an impact as both a threat and an opportunity. Disrupted innovation raises financial technology or fintech in the financial services industry, not to be feared and shunned but a phenomenon that must be embraced in increasing growth and prosperity.

The presence of fintech technology-based financial services in Indonesia cannot be rejected and avoided in line with the development of information and communication technology. Increased Internet connectivity and mobile devices are driving the growth of adequate financial services infrastructure. The development of fintech in Indonesia is still in the development stage, where many industries have not been touched, and many opportunities have not been explored maximally. By the concept of the Indonesian Financial Services Sector Masterplan (MPSJKI), fintech must be able to synergize with the existing financial industry to provide significant benefits to the community. Regulators need to develop strategic policies to capture opportunities and face the challenges of fintech development to protect the public.

The Financial Services Authority (OJK) as an institution overseeing the financial sector in Indonesia strongly supports the presence of fintech. As a regulator, OJK issues fintech as alternative funding in addition to banks, capital markets, and financial institutions. OJK also invites financial institutions, especially banks, to collaborate with start-up companies working on the fintech business.

Bank Indonesia established the BI-FTO (BI Fintech Office) to bring about balanced and proportional regulations without having to turn off the pace of innovation from fintech actors. Bank Indonesia and the Financial

Services Authority (OJK) also carried out an initiative through the Sandbox Regulatory, where regulators were able to monitor the sustainability of fintech in a protected risk perimeter intensively. Apart from being used for evaluation, this will also provide space for regulators to take anticipatory and corrective steps at the right time if needed. Data generated throughout the monitoring and mentoring process can be optimized to improve the quality of policy responses. Because amid the exponential growth trend, data has become a significant asset for regulators and industry players as a basis for decision making.

OJK launched Fintech Innovation Hub as a center of development and became one-stop contact for national Fintech to connect and collaborate with institutions and institutions that are supporters of the digital financial ecosystem. The initiative aims to streamline coordination across ministries and agencies, develop the fintech industry that fits people's needs, develop new and potential fintech business models, and provide communication facilities between regulators and the fintech industry. At present OJK has issued the Financial Services Authority Regulation No.77/POJK.01/2016 concerning Information Technology-Based Money Lending and Borrowing Services.

Banks in Indonesia have been and are making improvements due to the fintech phenomenon, for example, BTPN and Bank Mandiri. The bank can no longer turn a blind eye to the development of fintech. BTPN and Bank Mandiri has been and was making improvements to the fintech phenomenon, and takes action to collaborate with technology actors.

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