

## **ANALYSIS OF FINANCIAL TECHNOLOGY BASED FINANCIAL INDUSTRIALIZATION IMPACT ON FINANCIAL SYSTEM STABILITY**

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### **Abstract**

Financial Services Authority in carrying out monitoring of financial system instability resulting from financial technology (Fin Tech) in Indonesia, it is necessary to study or investigate financial markets or sources of disruption / risk and measure and minimize risks might arise. Therefore, this research will study the analysis of the impact of financial technology -based financial industry on the stabilization of the financial system by using an analysis and risk approach with a SWOT matrix. This study uses a qualitative approach, while the analysis used is a risk mitigation strategic analysis. This research was conducted in three stages. The data in this study are from secondary and primary data. This type of research used in this study included in exploratory descriptive research using qualitative methods. The object of research is all financial technology companies in Indonesia and officially registered under the auspices of the Financial Services Authority. Evaluation and management of risks that have emerged are explained how the conclusion of the results and the solutions that must be taken in managing risk. Types of financial risk management with a diversified approach,

transferred, controlled risk. While the type of technology risk with a risk approach is avoided, the risk is funded, the risk is withheld. The banking industry must innovate to keep the financial system stable. The technology financial industry can be a partner or a reflection for the financial industry both banking and non-banking in serving the community in totality

**Keywords** : financial technology, financial industrialization, stability

## **1. Introduction**

The history of financial transactions during this period has experienced significant changes. Formerly humans began transactions with the exchange system. But at the time of change in the instrument of transaction has changed the exchange of goods into money as a medium of exchange which will now change again into virtual money or digital money. The occurrence of this change is in the form of the use of transaction tools which are the result of technological developments in humans who expect all aspects of activities to be more efficient and effective. From another point of view, some efficient economic activities are the expectations of all actors of economic activity, but if only efficiency is not enough. In the process of changing the exchange of goods into a medium of exchange and now there is another transition from printing money to transition to digital money, where trust between users is needed. Trust arises from circumstances for certainty, security, comfort, reliability, fairness, and usefulness of the use of these tools. Today paper money has been used as a more efficient means of exchange than a system of exchanging goods in the past. The printing money revolution became digital or virtual money, becoming a hot issue in this part of the world both in developed and developing countries today.

Money is the most used tool in the economy in many countries today. In this world, all countries always maintain the stability of their financial systems so that money is always in a stable value, namely by making regulations. A regulation

issued by each country is an effort to make the exchange tool used in a country remain in a position of exchange that can be trusted in producing certainty of value, security, justice, comfort and bring benefits.

The birth of digital / virtual money has an impact on a financial system to force changes in services that can serve or facilitate the use of digital / virtual money today. The role of government in digital financial services is very important. Here the role of the government makes regulations so that users can take advantage of the benefits of technology, the government should provide a forum that can simultaneously monitor and regulate for the sake of financial stability in a country.

Digital financial services are currently circulating in almost all countries in the world. Technology-based Financial Services, often abbreviated as Fin Tech. At present Fin Tech is divided into several types such as Fin Tech which has a variety of product offerings to its customers such as Fin Tech based on payment, financial planning, financing / loan services, and investment. These types of Fin Tech are increasingly attracting people's interest in meeting their daily needs.

Development of Fin Tech carried out by financial institutions, be it banking, savings and loan cooperatives and other financial institutions, can increase financial literacy and financial inclusion in Small and Medium Enterprise (Wachyu and Winarto 2020) . The development of Fin Tech has grown rapidly in recent years. Every year global investment in Fin Tech's business activities continues to grow rapidly. At present Indonesia is the best market for the growth of the e-commerce industry from a total population of 264 million people, Indonesia's population is 171.17 million or 64.08% connected to the internet. In 2016, based on a report released by IdeA (Indonesian E-commerce Association), Google Indonesia and Taylor Nelson Sofres (TNS) revealed that online trade in Indonesia could reach 300 trillion rupiah (around US \$ 25 billion). According to research conducted by Accenture, in 2013 global investment exceeded 4 billion

dollars. Then investment rose more than 12 billion dollars in 2014 and rose more than 22 billion dollars in 2015, while in 2016 the Fin Tech sector received venture capital investment of 5.3 billion US dollars, representing 50% of all investment in the first quarter in Asia Pacific.

Meanwhile, according to another version, DBS Group Research believes that its rapid growth can be seen from the value of investment invested in venture capital (VC) to start up Fin Tech. No less than US \$ 13.8 billion in 2015, more than twice the investment in 2014. Currently there are 19 Fin Tech worth more than US \$ 1 billion or often called "unicorns". The growth is assessed because the existence of Fin Tech is a technology and innovation to reach customers who cannot access the conventional banking system and financial services.

In addition to the obligations of the banking industry and financial institutions demanded to increase innovation in the digital field, the government must also be able to issue policies or regulations governing the presence of Fin Tech in all aspects of the near future. At present, the Indonesian government does not yet have strict and comprehensive regulations. The reason is that the government has only been able to issue a policy package through the Electronic Transaction Law and the Trade Law listed in Law No. 7 of 2014, specifically articles 65-66 aimed at consumer protection. Therefore, indirectly the existence of today's financial technology if it is not balanced with innovations from the banking industry and the government nevertheless determines its attitude, it can create a destructive impression on the financial industry and disrupt financial system stability. It is enough to be a lesson and serious consideration that the Fin Tech incident of the dotcom bubble company which stormed the crisis of the American financial system during 1999 and 2000 did not continue to destroy the Indonesian economy. The crisis occurred because in that year, the US Federal Reserve had gradually increased interest rates six times and budgeted multi-billion dollar spending to sell simultaneously shares of leading technology companies such as Dell, Cisco and IBM that triggered a chain reaction of investors who then

liquidate its shares. The impact was that the company broke and the economic system began to run out of control.

## **2. Concept of Financial Technology**

In order to strengthen the country's economy, the financial sector plays an important role in making it happen. Over time, the concept of the financial sector is expected to be able to adapt to global issues and technological developments. One form of the adjustment appears the term technology-based financial or Fin Tech (Financial Technology)

The concept of Fin Tech according to The National Digital Research Center (NDRC), Fin Tech is an innovation in the financial sector. The innovation was carried out using application-based start up technology used in the financial transaction process such as the payment process, the process of borrowing money, the process of financial planning, the transfer and sale and purchase of shares. In addition to being more practical in its use, the existence of the Fin Tech industry concept is expected to bring a more effective, efficient and secure financial transaction process. Fin Tech or financial technology is a relatively new subject in the literature but commonly cited as one of the most important innovations in the financial industry (Iman 2020).

## **3. Concept of Financial System Stability**

The financial crisis that occurred in Indonesia in 1998 and several countries in Asia remained a frightening specter and caused various adverse impacts in every sector without exception the loss of public trust towards financial institutions, a declining economy and a weakening rupiah exchange rate so the increase in commodity prices in the market is not controlled. One of the triggering factors is the weakness of the financial system. Though the financial system plays an important role in the economy.

As part of the economic system, the financial system functions to allocate funds from parties experiencing a surplus to parties experiencing deficits. If the financial system is unstable and does not function efficiently, the allocation of funds will not run properly, the impact on economic growth will certainly be hampered. On this basis the discourse in maintaining and realizing system stability becomes a serious work that must be immediately addressed and realized.

Financial System Stability (FSS) according to (Bank Indonesia), 2016) has a variety of definitions because there is no internationally recognized standard reference, but conceptually that a stable financial system is a strong financial system and is resistant to various economic disturbances so that it remains capable perform intermediary functions, carry out payments and spread risk properly. Technology-enabled innovation in financial services, or Fin Tech, is growing rapidly. As a result, the FSB has been analysis the potential financial stability implications from Fin Tech with a view toward identifying supervisory and regulatory issues that merit authorities' attention (Financial Stability Board 2017)

#### **4. Fin Tech and Financial Inclusion**

The existence of Fin Tech (Financial Technology) in Indonesia has an impact that can provide convenience for the public in conducting financial transaction processes. This easiness is supported by a discourse from the government which will form the Steering Committee of the National Inclusive Finance Council. Later, if the team is formed, it can provide opportunities for the development of the Fin Tech industry in Indonesia.

Expanding access to financial institutions including banks can increase financial inclusion. The innovation efforts of Fin Tech's development that are increasingly known to the wider community make financial institutions more accessible to the wider community because of relatively unconstrained infrastructure and time constraints. In addition, Fin Tech products have a variety

of products that are diverse and relevant and in accordance with the needs of the community.

The reason is according to (Bank News Info, 2016) the position of Indonesia's Inclusive Financial Index (IFI) in 2014 was 36%, which is still below the IFI of several ASEAN countries such as Thailand (78%) and Malaysia (81%), although still greater if compared to the Philippines (31%) and Vietnam (31%). The implementation of the National Inclusive Financial Strategy with strong institutions is expected to increase the percentage of access to financial services in formal financial institutions by 75% by the end of 2019.

The current existence of Fin Tech is generally considered to be able to help increase financial inclusion in the community. For example the Fin Tech Industry which is engaged in the transportation business of Gojek is considered to have more than 250 thousand online motorcycle taxi driver partners and has introduced banking products and financial institutions to all its partners. With the presence of Fin Tech which continues to emerge, it is hoped that it can help the government in pushing for the implementation of financial inclusion to a wider community in Indonesia. Digital finance and financial inclusion has several benefits to financial services users, digital finance providers, governments and the economy; notwithstanding, a number of issues still persist which if addressed can make digital finance work better for individuals, businesses and governments (Ozili 2018)

## **5. Fin Tech Risk Mitigation**

In its implementation, Fin Tech besides having various positive sides and great opportunities to be implemented and developed, it still has risk factors that should not be forgotten. Operational risk caused by moral hazard both for Fin Tech industry players and customers is one thing that needs serious attention, otherwise Fin Tech can become a media of fraud. In addition, the risk of the security system used must also be considered, so that security between the two

parties can be maintained. Therefore the need for strict regulations and policies from the government in an effort to support and protect. So that the risks posed can be mitigated and the Fin Tech industry continues to have a symbiotic impact on mutualism for the perpetrators. In the implementation of risk mitigation, the Financial Services Authority can also involve the Indonesian Fin Tech Association to address risks in order to provide a sense of security for investors and publishers in the use of the Equity Crowdfunding platform in Indonesia (“Supervisory Role of The Financial Services Authority in Utilizing Equity Crowdfunding in Indonesia” 2020)

## **6. Research Methods**

This research was conducted in three stages, the first stage was identification of Financial System Stability Strength variables, identification of Financial System Stability Weakness variables, identification of opportunities from Fin Tech in assisting Financial System Stability and identification of threat / obstacles from Fin Tech in helping to maintain Financial System Stability,

Second stage, conducting a matrix analysis that displays eight boxes, the top two are variables from Fin Tech (opportunities and threat) while the left two boxes will be filled with variables from Financial System Stability (FSS) (strengths and weaknesses) The other four boxes are a box of strategic issues that arise as a result of the meeting point between internal and external factors. This matrix will bring together the FSS variable with the Fin Tech variable.

Third stage, Evaluate the results of meeting variables and provide analysis and control solutions of emerging risks. Each cell or meeting box has its own risk control solution that makes everything covered so that the government's plan to accept Fin Tech becomes one of the alternative solutions for efficient financial services. Risk control measures taken after the crossing of the matrix occur as in the following figure:



	Fin Tech Opportunity Variable for FSS (Urgent)	The Fin Tech Threat Variable for FSS (Not Urgent)
Strength of Fin Tech (Good performance)	CELL A (Good and Important Performance) Receive Solution	CELL B (Good performance and not too important) Overcome
Weaknesses of Fin Tech (Poor Performance)	CELL C (Poor and Important Performance) Explore Solution	CELL D Poor performance and not too important) Minimize Solution

After the results of the above matrix appear, the risk management will be adjusted to the level of risk. Some ways to control the first risk are better to avoid risks, risks can be held, risks are diversified, risks are transferred, risks are controlled, risks are funded.

The data in this study are from secondary and primary data. Secondary data is taken from data provider institutions and while primary data is taken from relevant sources in the Fin Tech industry shareholders. So that the type of data in this study was obtained from factual data by means of observation and will be supplemented with relevant party documentation data that has been declared validity of the data.

This type of research used in this study included in exploratory descriptive research using qualitative methods. The object of research is all financial technology companies in Indonesia and officially registered under the auspices of the Financial Services Authority.

## 7. Result and Discussion

The presence of financial technology cannot be denied like two blades for stability financial system and society in general. So if you want to maximize the presence of Fin Tech it must be known which side causes instability and which side will accelerate growth. So this research will examine an analysis of risk mitigation the impact of the presence of Fin Tech. With a risk mitigation method by combining and analyzing tools SWOT The first step that must be done is the identification of variables. In this stage it will show each line of weaknesses and shortcomings of Indonesia's financial stabilization system and lines the opportunities and challenges faced when Fin Tech as a new product.

a. Strength and Opportunity

The strength of Fin Tech consists of ease of access to finance, product innovation more easily and quickly, diversification of investment risks, being able to accurately select data then control risk can be monitored. This makes Fin Tech have a great opportunity in financial system stability as it does, seeks to reduce losses resulting in systemic risk, accountability and transparency of financial statements makes it easy to mitigate risk, clear assessments when contracts, legal, and use the Indonesian currency rupiah facilitate control of financial stability, Good screening for customers and for the financial industry of banks makes security under control.

We can see that Fin Tech's strengths from operations can only be that of Fin Tech need information and the internet in mediating between the two parties. In its operation Fin Tech can reduce information asymmetry because it directly meets with both parties without intermediaries (peer to peer). Lower cost. Real time, Data transparency. Fin Tech can co-exist with the traditional financial industry. Opportunities that will be obtained from Fin Tech operations also have many advantages. First, the biggest opportunities are internet and smartphone users which are getting bigger, the presence of Fin Tech is a good response in implementing financial inclusion. Prevent money laundering, Available official data that can be accurately accounted for criminal evidence. Customer data is safe

and always applies the precautionary principle. Can detect risks that pose obstacles in the financial industry. through transparency and accountability. Maintain consumer customer information.

b. Weaknesses and Opportunities

The validity of inspection or business screening is not strict, the emergence of financial risk, credit risk, leverage risk, liquidity risk. Fin Tech erodes long-standing partnerships. Weaknesses above can be covered by the possibility of opportunities to cover weaknesses, one of which makes the potential loss absorbed if it can integrate with the Insurance. Accountability and transparency of financial statements make it easy to mitigate risk.

Legality impacts weak public trust. Data security has not been tested long. Technology risk, operational risk, cyber risk, system risk, Moral Hazard risk make operations difficult to win the trust of the public. This can be mitigated through opportunities arising to cover first providing regulations that have been tested by the central bank, providing secure customer data and always applying the precautionary principle. Can detect risks that pose obstacles in the financial industry. through transparency and accountability. Treat fairly to every consumer. Maintain consumer customer information. Can maximize for financial inclusions that have not yet been reached.

c. Strength and Threat

Financial strength of Fin Tech is financial access that is not limited by time and place. Product innovation is getting easier and faster. Diversification of investment risks, Risk control can be monitored through data exploration. While the financial challenges are still high in fraud, abuse of authority is still a separate obstacle. Lack of data so that many customers are exposed to unbankable status.

Utilize the Internet and Information in mediating financial needs. Reducing information asymmetry because it directly meets with both parties without intermediaries. Cheaper in cost. Real time, Data transparency. Fin Tech can co-exist with the traditional financial industry. Clarification of business

viability that only requires big data. Helps access to finance that is not affordable by traditional banks. Can reach as far as the internet is available. Reducing accidental. But this will be complemented by various challenges for example the lack of human resources who master Fin Tech. Cybercrime control in Fin Tech. Facilities and infrastructure in supporting technology.

#### d. Weaknesses and Threats

Threats besides weaknesses in operation is the lack of human resources who control Fin Tech. Cybercrime control in Fin Tech. Facilities and infrastructure in supporting technology. Lack of technological literacy. Those who do not implement the regulations will get sanctions. Movements are limited by many regulations.

The absence of integration with the central bank has not been centralized data. Different currencies. Bank Indonesia as the manager of systemic risk in the financial stability system does not yet have regulations or laws that can absorb the potential risks posed by Fin Tech. Potential for money laundering and funding for drugs or terrorists. Bank Indonesia as an independent institution that regulates, oversees and controls Financial System Stability has not found a solution in mitigating risks that can affect the ups and downs of the money supply in the market.

## **8. Conclusions**

Provide accelerated economic growth due to the balance of demand and supply, innovation. Providing structural solutions for the growth of electronic-based industries (e-commerce). Encouraging the growth of small and medium-sized businesses and the birth of entrepreneurs (entrepreneur) new. Encourage creative endeavors (such as artists, musicians, application developers, etc.) to achieve broad market distribution (critical mass). Enabling market development, especially those that have not yet been served by financial and banking services.

Fin Tech can be a driver of development including capital mobilization, increasing economic activities of low-income people and small businesses. Mobilize money in the community to finance basic infrastructure, such as sanitation and electricity. Mobilization of funds to encourage sustainable infrastructure development.

Fin Tech has several inherent risks, namely financial risk and technology risk. Risk management can be managed in various ways according to the costs required and efficiency in management. Types of risk management including risk better avoided, risks can be held, risks of diversification, risks transferred, risks controlled, risks funded.

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