Influence of Financial Technology on National Financial Institutions

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Abstract. The purpose of this paper is to analyze whether the role of FinTech (Financial Technology) currently has a good or bad effect on national financial institutions (banking). This study used descriptive methods and gathering information/data via the internet. FinTech was created to implement technology in the financial sector. The results of his research, namely FinTech, could hamper the development of banking, but could also be an opportunity for the banking sector itself. From these results, it was said that banks could be digitized because of the encouragement of FinTech. This is due to FinTech taking a large part of the banking industry's market share. Of course, FinTech can be a threat as well as an opportunity for national financial institutions.

1. Introduction

Financial technology or often referred to as Financial Technology (FinTech) is related to a system that aims to assess and produce finance. This financial system in FinTech combines trading systems and trading technology in transactions on different markets [1]. National financial institutions are banking which consists of employees and investors. Employees who have a business commitment in the form of social responsibility [2].

Many previous studies discussed similar issues with our paper, which is about FinTech. The paper explains the consideration of financial infrastructure to support financial innovations. The difference is, that paper analyzes regarding the use of FinTech in the implementation of macro stabilization policies [3], while we analyzed the impact of FinTech on banks. The journal, titled The Financial Technology of Saving Information and Credit Institutions in Developing Economies described the points in the same journal that we made is about FinTech. The difference is that they explain about credit institutions. Generally, in rural economies of third countries, non-institutional finance is the most basic system [4]. The article also studies financial technology from credit institutions and savings schemes. The journal that explains the technology strategy and financial performance explains the same point, namely the technology strategy. In essence, technology strategies are things that become technology or reference pioneers. The technology strategy is also a source for decision making on basic and applied R & D that must be done [5]. There are some further studies that examined the FinTech, one of them called a militant technology to be implemented on a financial plan in the launch of new business. The contents were explained about the views of decision-making is a cornerstone for the young entrepreneur who usually do not use the financial draft strategy prior to taking a decision [6]. Decision making is one of its financial strategies. There are also journals that take the theme of technological development. Its contents are technological developments which can improve performance and develop a financial
system that was originally manual to digital system [7]. Then, the journals that describe the provision of finance for innovation. The intent here is the innovation system to generate a new online system for buying and selling transactions in different markets [8]. That is where FinTech holds power because it makes it easier to transact. The journal that discusses technology transfer tells about what aspects that affect the transfer of technology related to the wider community [9]. The last is a journal about technology that improves financial access which concludes that technology is the main key holder to send transaction evidence to the agency in need [10].

The purpose of this paper is to analyze the impact of the emergence of FinTech today on national financial institutions. The methods used are descriptive method, gathering information via the internet, and taking data through existing journals accompanied by quotations.

2. Method
This study uses descriptive research methods and information gathering through the internet to find out variables regarding Financial Technology and National Financial Institutions. And also use previous research related to FinTech and the influence of FinTech on National Financial Institutions or banks, especially employees so that it can be analyzed about how influential FinTech is on the National Financial Institution at this time.

3. Results and Discussion
The first thing that will be discussed is the percentage of the FinTech application usage nowadays. Previously, I would give a description of what FinTech applications are currently helping in daily life. The first picture to describe Go-Pay function (Figure 1).

![Go-Pay Function](https://www.google.co.id/imghp?hl=id)

**Figure 1.** Go-Pay Function, Figure was adopted from [https://www.google.co.id/imghp?hl=id](https://www.google.co.id/imghp?hl=id) on Oct 17th, 2018.

Go-Pay is one of the FinTech applications that is shaded by Go-Jek, whose presentations of usage are increasing. One of the functions of Go-Pay is electronic money. The purpose of this picture below is the function of Go-Pay itself, the first is to pay for the food we buy when we order food using the Go-Jek application, namely by selecting the Go-Food menu. So, without using physical cash we can still pay for the food. The second is to pay without issuing cash where we choose the Go-Mart menu on Go-
Jek. In essence, Go-Pay is a tool that allows us to transact when buying and selling when we do not have cash (Figure 1).

The second discussion is about the percentage of use of the FinTech application (Figure 2).

The picture above is the percentage of Mandiri E-Money application usage, BCA Flazz, Telkomsel TCash, and Go-Pay. The source was taken in 2016. There, the highest number of users is Mandiri E-Money where the Mandiri E-Money function itself is to transact on toll payments where nowadays toll payments have used electronic money entirely, no one uses cash anymore. Therefore, Mandiri E-Money is very instrumental in this aspect.

Then, the next discussion about FinTech and Banking. The growing development of digital technology encourages the increasing need of society for better financial access. This has led to the emergence of financial technology startup as a new business vertically. Globally, financial technology continues to grow as the number of investments in financial technology companies increases. As an illustration, in 2014 total investment in financial technology reached 12.24 billion. The power of innovation and its ability to reach financial needs that have not been reached by the financial industry, especially the banking industry has raised questions. Is Fintech a threat or opportunity for the financial industry?

Financial technology is companies that use technology to make the financial system more efficient [11]. Basically, financial technology is divided into several types based on the services they provide. There are companies that provide money transfer services such as Squarecash, Venmo, TransferWise, and VeryFund in Indonesia. There are fintech that provide purchasing services such as Google Wallet, Paypal, and Square Order, in Indonesia there is Moka. Fintech provides tracking of spending services such as Bill Guard, DollarBird, and in Indonesia there is Jojonomic. There are fintech that provide investments such as Wealth Front, Betterment, and in Indonesia is Bareksa.com. Some provide borrowing services such as Prosper, Lending Club, Affirm, and in Indonesia there is Friend Money. There is Fintech Indonesia, the association of financial technology service providers which has a branch in Indonesia. Its members are bareksa, cekaja.com, veritrans, doku wallet, kartuku, mandiri ecash, and so on. The presence of fintech is even believed to change the financial world. Along with the increasing number of internet users, and mobile phones, the market share taken by fintech (the payment mode sector) is very large in number because the payment method covers all economies. Maybe for this reason fintech is seen as a dangerous threat.
In Indonesia alone, although financial technology showed significant growth, but its overall portion has not been able to shift the role of the banking industry as a legacy and incumbent in the financial industry. Financial technology excellence in innovative technology information is also accompanied by a number of shortcomings including lack of risk management, difficulties in capital and untrusted by the public. While the banking industry has advantages in terms of public trust. The banking industry has also evolved by combining the advantages of physical networks and digital networks. Unlike financial technology, the banking industry is clearly much more stable because it is supervised by regulators, and has more tested corporate governance and risk management. It is interesting if we look forward about how financial technology companies are charged with the obligation to fulfill compliance with rigid regulations. It is also interesting to assume how far the extent of capitalist's strengths in providing capital support for the financial technology company.

Indeed, with various shortcomings and strengths, there is a huge potential if the two industries are united. The banking industry as a much more established financial institution should be able to embrace financial technology companies. In my opinion, competing directly with fintech is not a wise move. The synergy between the two industries can encourage an increase in the performance of each industry. Especially for the banking industry, synergy with financial technology can encourage banks to become more efficient and more inclusive.

Below is a discussion about FinTech can shift the position of workers in the bank. Going forward, the big wave of fintech will be felt in the world of banking jobs with the following illustration:

a. Customer Service
Every time you enter all banking channels including cash offices, sub-branch offices, main branch offices, and head office, customers will be welcomed by security and customer service. Almost every bank uses Customer Service personnel in each of its 1-5 channels that are adjusted to the needs of each channel. Undeniably, the biggest service that can be seen daily in the banking channel is Customer Service. Even in most of the community, the work world in banking is only Customer Service. Now there is a highly technological fintech service in one of the major banks in Indonesia where opening an account could be done without having to come to the branch. Account opening is also very easy, just download the application in the Google Play Store or Apps Store. Then fill in personal data, photograph your ID card, NPWP, and sample signatures, and also take pictures while holding a KTP. After all data and documents are completed, the bank account will be processed. In addition to serving account opening, Customer Service is always the right place to consult banking products both savings and loans, and the terms and conditions. Not just consultation, many potential customers come to Customer Service just to compare products in several banks. If you are a customer with a character like this, at this time you don't have to bother with banking that is haunted by congestion and long queues. Simply surf to www.cekaja.com. You can find out about banking products, insurance and compare them according to the goals you want.

b. Teller in general
The services provided by tellers include deposits and cash withdrawals. The amount is comparable straight to Customer Services, most of the job desc of tellers can be done at ATMa (Automatic Teller Machine) and CDMa (Cash Deposit Machine). The presence of ATMs and CDMs at strategic location points is very helpful for customers to make deposits and to know Cash withdrawals, transfers, payments (PLN, PDAM, Installment Credit, education, Telkom, mobile phone bills, Cable TV, Tickets, ZISWAF etc.), Purchases (pulses, electricity tokens, plane and train tickets etc.), and check balances. This service has no time limit which can be accessed for 24 hours. Of course, this requires a
very large investment, the greater the investment of banks in the field of ATMs and CDMs, the teller function will be further eroded. Not to mention, in recent years payment gateway technology has thrived in Indonesia, this technology has replaced the teller function as mentioned above. Paytren for example, the application made by Ust. Yusuf Mansur who has a tag line: Friends Pay-Pay can help anyone to do any transaction without having to leave the house, just via mobile.

c. Back-Office
One of the Back-Office tasks is to check and ensure that the transactions carried out by the teller are correct and appropriate and make the company's bookkeeping from daily to annual. Back office personnel are usually 1-2 people again depending on the needs. From the job desc, it seems that Back Office is a supporter of tellers. That is, if what needs to be supported will decrease, then automatically the presence of support personnel will also decrease?

d. Funding & Financing / Lending Officer
According to Law No.7 of 1992, Definition of a Bank is a business entity that collects funds from the public in the form of deposits and distributes them to the public in the form of credit and / or other forms to improve the standard of living of the people. The discussion below is the percentage of electronic money in Indonesia (Figure 3).

![Figure 3. Increase in the amount of electronic money.](image)

More and more people are using electronic money for buying and selling transactions. Besides, this electronic money also sometimes becomes mandatory when we are on the toll road, which now toll payments must use electronic money to avoid driving vehicles when they pay for tolls. Even electronic money is a matter that makes it easier for us to transact when we don't bring cash. This is one of the very profitable innovations from FinTech.

The next discussion is whether FinTech is an obstacle or an opportunity for banks? The Financial Services Authority (OJK) continues to push the financial services industry such as banking to be able to synergize with the financial technology industry (Fintech), so that these two industries can grow together and not compete for market share. The growth of the fintech industry in Indonesia is very rapid. The Indonesian FinTech Association noted that domestic FinTech start-ups operating in Indonesia
reached 165 companies as of January 2016, or grew by 4 times compared to the fourth quarter of 2014 of 40 companies [12].

OJK acknowledged, Fintech's presence had indeed taken a portion of the banking industry's share. This condition is certainly a separate threat for banks. However, the presence of fintech should not only be considered a threat, but must also be considered as an opportunity for banks. In terms of opportunities, fintech will encourage banks to digitize and automate. The reason is, this step can cut banking costs by around 30 percent. While in terms of income, will increase due to the presence of new innovative products and innovative business models. The Fintech Expert Forum (FinTech Advisory Forum) is a forum for developing the direction of the Fintech industry [13]. This forum will facilitate and ensure inter-agency coordination, ministries, and parties related to Fintech start-up run smoothly, consistently and constructively.

The Fintech Expert Forum consists of individuals who are competent in the field of information technology and dynamics in the field of digital financial innovation from OJK, Bank Indonesia, Coordinating Ministry for Economic Affairs, Ministry of Finance, Ministry of Industry, Ministry of Trade, Ministry of Communication and Information, Ministry Domestic, Ministry of Law, and Human Rights. Apart from that, the Creative Economy Agency, the Indonesia Stock Exchange, the Indonesian Clearing and Guarantee Corporation (KPEI), the Indonesian Police Criminal Investigation Agency, the State Owned Bank Association (HIMBARA), the Indonesian Fintech Association, the Indonesian Life Insurance Association, the Indonesian General Insurance Association (AAUI), Indonesian Securities Companies Association (APEI), Universitas Indonesia, and Institut Teknologi Bandung.

4. Conclusion
Financial Technology is one of the ways to make it easier for us to process buying and selling transactions. In the beginning, the presence of FinTech was very threatening to the existence of national financial institutions (banking) because it had taken a large part of the banking industry's market share. But the presence of FinTech encourages banks to digitize, this is what provides opportunities for banks because it can cut banking costs by as much as 30% of the digitization.

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References
[1] Freedman, R. S. (2006). Introduction to financial technology. Elsevier.
[2] E.S. Soegoto.2014. Entrepreneurship. Jakarta: PT Elex Media Komputindo. pp. 538
[3] Bodie, Z., & Merton, R. C. (1995). Financial Infrastructure and Public Policy: A Functional Perspective. Available at SSRN 6639.
[4] Bouman, F. J. A. (1979). The rosca: financial technology of an informal savings and credit institution in developing economies/l'arec: la technologie financière d'une institution informelle d'épargne et de crédit dans les économies en développement. Savings and development, 253-276.
[5] Zahra, S. A. (1996). Technology strategy and financial performance: Examining the moderating role of the firm's competitive environment. Journal of Business Venturing, 11(3), 189-219.
[6] McCann, Joseph E. "Patterns of growth, competitive technology, and financial strategies in young ventures." Journal of Business Venturing 63 (1991): 189-208.
[7] Wardiana, W. (2002). Perkembangan teknologi informasi di Indonesia.
[8] Giudici, G., & Paleari, S. (2000). The provision of finance to innovation: a survey conducted among Italian technology-based small firms. Small Business Economics, 14(1), 37-53.
[9] Audretsch, D. B., Lehmann, E. E., Paleari, S., & Vismara, S. (2016). Entrepreneurial finance and technology transfer. The Journal of Technology Transfer, 41(1), 1-9.
[10] Lyman, T. R., Pickens, M., & Porteous, D. (2008). Regulating transformational branchless banking: Mobile phones and other technology to increase access to finance.
[11] Mishkin, F. S., & Strahan, P. E. (1999). *What will technology do to financial structure?* (No. w6892). National Bureau of Economic Research.
[12] Davis, K., Maddock, R., & Foo, M. (2017). Catching up with Indonesia’s fintech industry. *Law and Financial Markets Review, 11*(1), 33-40.
[13] Treleaven, P. (2015). Financial regulation of FinTech. *Journal of Financial Perspectives, 3*(3).