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Fintech's Influence on Payment Services of Commercial Banks in the Post COVID-19 Context

¹Nguyen Tien Dung, ²Nguyen Thi Thuy Nga
^{1,2}University of Labour and Social Affairs, Hanoi, Vietnam

Corresponding Author: **Nguyen Thi Thuy Nga**

Abstract

In the post Covid 19 context, the rapid increase in financial services applying Fintech technology has impacted and drastically changed the provision of financial and banking services by promoting the big data for individuals and businesses through advances in artificial intelligence, computing power, encryption and internet accessibility. The development of Fintech companies has posed many opportunities and challenges for traditional business models globally in general and Vietnam in particular, especially for commercial banks in the payment sector. Based on

analyzing the current development status of Fintech and assessing the impact of Fintech on payment services of commercial banks in Vietnam, the article hopes to give some recommendations to help commercial banks have can be applied in the future such as: needing to secure transactions in the system, adding electronic payment methods, developing new distribution channels; improve data security system upgrades; technology improvements; recruitment and training of human resources; Cooperate with Fintech companies to create added value for customers.

Keywords: Fintech, Commercial Banking, Payment, Covid-19

1. Introduction

Covid-19 has caused negative impacts on the economy and people's lives around the world. Among them, it is impossible not to mention the huge challenges for comprehensive financial efforts. The blockade and social distancing measures implemented in many countries have led to the closure of a series of bank branches and the temporary suspension of operations of mobile money institutions. However, Covid 19 has also changed customer behavior as transactions in the digital space have become much more popular to increase resilience to risks. Governments encourage the use of cashless and contactless payment methods to minimize the risk of virus spread, providing opportunities to apply digital financial services. Forms of financial services such as banking, insurance and stock trading are carried out through electronic means, including through the Internet and World Wide Web services, allowing individuals or businesses to Access accounts, make transfers and gather information about financial products and services without having to contact financial companies directly. Post Covid 19 also accelerates the penetration of financial and digital technology and promotes technological innovation and creativity. Therefore, creating conditions for applying financial technology (Fintech) to banking payment activities is inevitable, especially in the post Covid 19 context.

Based on an increasingly developing technology platform, the trend of integrating management software technology into payment methods is to bring convenience to users, as well as to differentiate products in the field of payment. Finance and banking, Fintech businesses are born and grow stronger, not only bringing many benefits to customers but also directly impacting the payment services of commercial banks. The article aims to provide some theoretical foundations about Fintech and payment services of commercial banks, thereby analyzing and evaluating the reality in Vietnam through the impact of Fintech on banking and propose some concluding implications that can be applied in the future.

2. Methodology

The article uses secondary sources of documents from different agencies and organizations, focusing mainly on: (1) Reporting system and data of the state bank; (2) Website, other references related to the development of Fintech that affect payment services of Vietnamese commercial banks in the post Covid 19 context.

In addition, the authors used traditional analytical, comparative, and statistical research methods to clarify the impact of Fintech on payment services of commercial banks as well as find solutions suitable to the economic model and development trends in Vietnam and make some recommendations to help Vietnamese commercial banks harmonize or compete with the development of Fintech in the payment field.

3. Theoretical Framework

3.1 Fintech

Fintech-short for Financial Technology. Fintech refers to the innovative use of technology in financial service activities such as cloud computing, big data analysis, artificial intelligence, etc.

In a more complete sense, according to Wikipedia citing Hufington Post, Fintech is defined as a new financial industry that applies technology to improve financial performance. The concept of Fintech can be given as follows: Fintech is the application of innovative, creative and modern technology to the field of Finance-Banking (banking, insurance, securities...). Accordingly, the characteristic of Fintech is the provision of technology-based products and services through applications (software), which users can easily download and install on smart devices. Thus, to apply smart solutions and services in providing services at lower costs, more effectively and more conveniently than traditional services, the trend of cooperation between Fintech companies and Financial institutions are inevitable.

According to Ngoc (2018) [7], unlike traditional financial markets, there are two subjects, financial institutions (banks, finance companies, investments, insurance, securities) and customers, the subjects of Fintech includes three parties: financial institutions, Fintech businesses and customers interacting with each other. Thereby, in addition to common services such as payment, lending, money transfer, Fintech also provides broader financial services such as crowdfunding, peer-to-peer lending, personal financial advice, insurance technology, digital currency, data management.

Thus, it can be seen that Fintech's diverse applications are affecting almost all areas of the financial industry such as: payment deposits, savings deposits, payments, insurance, securities, credit, risk management. Not only that, Fintech also affects the market structure, product structure, development strategy and all business aspects of the entire banking and financial system. Fintech companies' outstanding points in the financial services market lie in their fast payment speed (peer-to-peer payments), convenience in personal financial management, and ability to access loans (community sponsorship, crowdfunding). Besides, Fintech companies also bring many benefits to banks, businesses and users such as: (i) Reducing search costs of suitable transaction parties; (ii) Achieve economies of scale in collecting and exploiting big data; (iii) Transactions become safer and cheaper; (iv) Reduce verification costs (Thakor, 2019) [10].

3.2 Commercial Bank

Commercial banks have been formed and developed for hundreds of years in association with the development of the commodity economy. The development of the commercial banking system has had a huge and important impact on the

development of the commodity economy. On the contrary, when the commodity economy develops to the highest stage of a market economy, commercial banks are increasingly perfected and become indispensable financial institutions.

According to the Act of the Bank of the French Republic in 1941^[3], it is defined: "Commercial banks are establishments whose regular occupation is to receive money from the public in the form of deposits, or in other forms and use that resource for themselves in discount, credit and financial operations".

According to Clause 3, Article 4 of the Law on Vietnamese Credit Institutions (2010) [8]: "Bank is a type of credit institution that is allowed to carry out all banking activities and other business activities according to regulations with the aim of profit".

From the above definitions of banking, it can be concluded that a commercial bank is a type of bank that directly transacts with businesses, economic organizations and individuals through deposit and savings operations. Use that capital to lend, discount, provide payment facilities and provide banking services to the above subjects.

Commercial bank activities include:

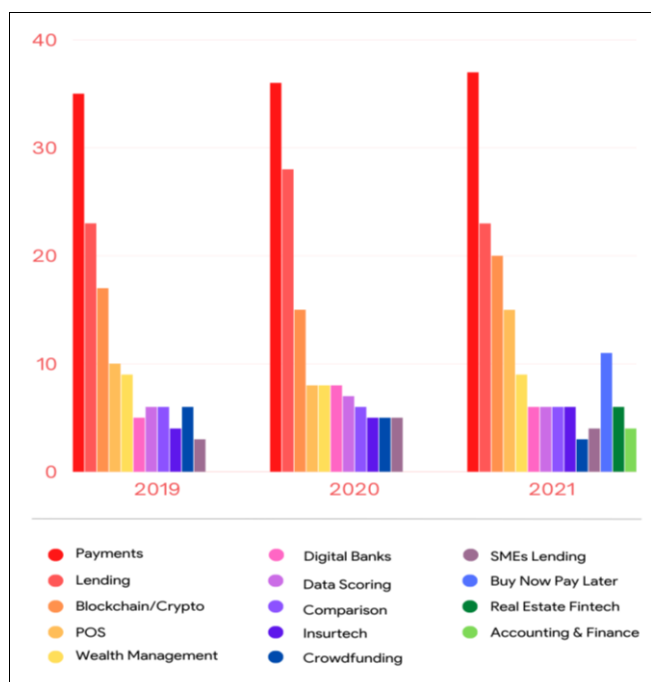
- Capital mobilization activities: In addition to own capital, capital mobilization activities are important for commercial banks in creating capital for business operations. In this activity, commercial banks are allowed to use the tools and measures allowed by law to mobilize idle capital sources in society as a source of credit for loans to meet the needs of the economy. Capital mobilization activities of commercial banks include: Receiving deposits and issuing valuable papers; Borrow capital; Mobilize other capital.
- Credit activities: activities that constitute assets and are important to the survival and development of each bank. Credit activities of commercial banks include: Lending; Discounting, rediscounting, pledging commercial papers and valuable papers; Bank guarantee; Financial leasing.
- Payment and treasury service activities, including: Payment facilities provision services; Domestic payment services for customers; International payment services and foreign currency, gold, silver and gemstone trading; Providing collection and payment services for organizations and individuals; Developing electronic banking products; Other products such as financial consulting, asset holding, check payment...
- Other activities such as: Contributing investment capital, buying shares of businesses and other credit institutions from own capital to diversify investment portfolio, limit risks and improve business efficiency; Participate in the currency market; Entrustment and agency activities related to banking activities, including the management of assets and investment capital of organizations and individuals under contracts; Insurance business activities; Securities service activities; Other activities such as preserving rare objects, valuable papers, safe rental, pawnshop services and other services according to the provisions of Law.

4. Results

4.1 The Development of Fintech in Vietnam

Although it began appearing in Vietnam in 2005 with the establishment of the first online payment service company,

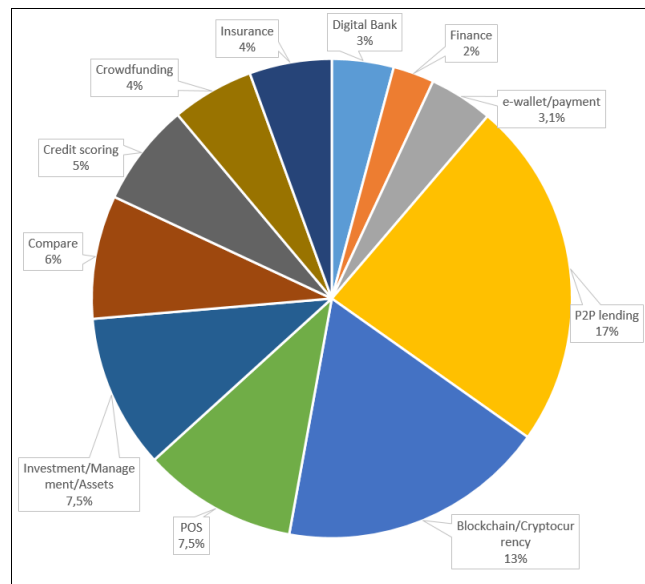
VTPay, the Vietnamese Fintech market has only grown strongly since 2015 until now, with many fluctuations. The emergence of startups in the Fintech field is gradually becoming a trend attracting much attention from the community and businesses operating in this field, especially in Ho Chi Minh City and Hanoi. Noi. Fintech Startups in Vietnam in 2015 were 39 companies, in 2017 it increased to 44 companies and in 2019 it continued to increase to 124 companies. This number decreased slightly to 115 companies in 2020, then increased to 150 companies in 2021 (Tri, 2021) [1], operating mainly in the fields of non-cash payment, peer-to-peer lending, digital banking, asset management, blockchain and virtual currencies, data management and alternative finance credit scoring (Figure 1).



Source: Vietnam Fintech report, 2021 [5]

Fig 1: Statistics of Vietnamese Fintech startups over the years

Regarding the contribution of services, payment services and peer-to-peer lending are the two dominant segments of Vietnam's Fintech market (accounting for nearly half of the total proportion), while other services such as management assets, data management/credit scoring, investment management, insurance, SMEs financial consulting services. are still in their infancy. Looking at Figure 1, it can be seen that electronic payment activities account for the largest proportion (31%) among all types of Fintech services. This comes from the large population size, support from the Government to promote a cashless economy, as well as high Internet and mobile usage rates in Vietnam (Nhung & al., 2021) [12]. Not only that, Fintech companies in the payment industry always attract the most investment capital and this is also the general rule of Fintech markets developing in the early stages (Tomorrow Makers, 2020) [11]. This trend will continue according to forecasts of the State Bank of Vietnam, the value of payments via mobile devices in Vietnam is expected to increase nearly 4 times, from 16 billion USD in 2016 to 70 billion USD. 9 billion USD by 2025 (ISEV, 2020) [6].



Source: Fintech News Singapore (2021) [2]

Fig 2: Contribution of services in the Fintech sector in Vietnam in 2021

4.2 Fintech's Influence on Payment Services at Commercial Banks

** Some Opportunities that Fintech Brings to the Payment Field at Banks*

Fintech is understood as the application of modern technology in the process of distributing and using financial and investment services. Fintech helps develop financial services such as: Internet Banking, Mobile Banking, e-wallet. Creating convenience for customers in using modern banking services and saving transaction costs. Currently, most commercial banks are following the trend of Fintech application in payment, specifically online payment gateways, e-wallets, mobile payments... In the first 11 months of 2022 compared to the first 11 months In 2021, non-cash payment transactions will increase by 85.6% in quantity and 31.39% in value; through Internet channel increased 89.36% in quantity and 40.55% in value; through mobile phone channel increased 116.1% in quantity and 92.3% in value; through QR code method increased 182.5% in quantity and 210.6% in value... Cooperation between banks and Fintech has brought positive results to both sides and is the basis for promoting many Digital payment solutions explode effectively, helping parties take advantage of partners' strengths while overcoming their weaknesses after the Covid 19 pandemic. With the predicted impacts, banks should have The right solution to quickly adapt to this to improve service capabilities as well as help customers have more experience in financial services in general as well as the payment field in particular.

Current reality, customers are gradually converting traditional direct shopping to shopping on e-commerce sites. Therefore, banks always apply modern information technology software such as new generation corebanking software, applying creative solutions according to the general trend of digital transformation and digitization of services in the banking industry. with the ultimate goal of providing convenient, simple, smart payment products and services and reaching the best customers. Some banks have been implementing new and convenient services on

technology platforms such as:

- + A Transfer service: allows customers to make payments or transfer money by SMS anywhere with mobile coverage.
- + A Paybill: Allows customers to pay bills by text message.
- + Emobile banking: allows customers to perform many financial-banking services such as transferring money, recharging prepaid phones, buying game cards, phone cards, paying bills... and non-financial services-banking such as information exchange, investment management.

Thanks to the application of these services, it is possible to significantly reduce the circulation of bad (or fake) money, reduce money printing costs, and reduce legal violations related to the use of cash (Peterson, 2018) ^[9].

Applying digital technology helps banks simplify procedures and paperwork. Previously, using traditional paper processes took a lot of time, but now the application of digital technology helps make discussions more immediate, work flows better, reduces administrative paperwork and transparency is also enhanced. For example, according to the traditional method, when customers want to deposit money into an account at another bank, they have to go to the bank to perform the operation, but now it only takes 1 minute to operate on the phone. This contributes to reducing time and costs for customers.

At the same time, Fintech also creates opportunities for banks to expand beyond Vietnam and expand their scope of operations to the international market. The application of digital technology helps banks easily bring their services closer to customers everywhere in the world. Customers only need to stay at their location and use smart devices to use convenient services of banks without having to waste time, money and complicated administrative procedures. This can be considered a huge benefit that Fintech brings in reforming and reducing administrative procedures for banks. In addition, the development of artificial intelligence, blockchain, data science, digital identification and biometrics... has created an important infrastructure foundation, from using traditional bank employees to using artificial intelligence, robots will gradually replace some human activities. At the same time, digital identity will become the basic identity and be secured through biometric factors such as voice or fingerprint and a number of other smart devices.

Along with convenient access to banking services for customers everywhere in the world, Fintech also creates conditions for banks to access and expand the supply of appropriate banking products and services to people without accounts in remote areas with reasonable costs; thereby contributing to promoting national financial universalization.

* *Challenges for the Payment Sector at Banks*

First, we must talk about the challenge of financial capacity to invest in information technology infrastructure. The world is deploying 5G networks. Vietnam needs to quickly get ahead in deploying 5G networks to have telecommunications infrastructure to facilitate modern digital technology applications in the current banking system. Therefore, financial resources are also a really big barrier. Although large commercial banks have enough investment capital, they must also consider when considering costs, profits and strategic priorities in 2023. Second is the challenge of management and safety. The development of new technologies such as blockchain, big

data, and AI requires banks to have changes in management models and safety corridors against incidents of network security and customer information security. Practices from countries that have pioneered Fintech applications show that the more the financial system depends on electronic platforms and digital records, the more vulnerable they are to cyber attacks, and a failure can lead to risks to the entire system. At that time, both businesses and management agencies have to deal with cybersecurity issues such as financial fraud, system errors, technology criminals stealing data, and distributing code. toxic... (Furche *et al.*, 2017) ^[4]. Because recently, cyber breaches and attacks are increasing, leading to instability and further eroding customer trust. Banks are facing significant challenges in completing the legal corridor to serve electronic payment activities. In particular, the legal framework and policy mechanisms related to new and modern online and electronic payment services and means, virtual money, virtual cards, electronic money. are new issues, complex, needs to continue to be researched, evaluated, revised and supplemented to meet practical requirements and the rapid development of information technology and telecommunications. A typical example is the application of OCR handwriting recognition technology in customer identification. In developed countries, OCR recognition applications only need to read characters and images on the customer's identity card with a uniform template for each country. However, in Vietnam, this application needs to recognize many types of documents such as old ID cards, new ID cards, and citizen identification cards, causing many difficulties and obstacles for daily transaction activities of customer. Therefore, if the legal framework is completed, it will save a lot of time, costs and procedures for customers.

The development of Fintech inevitably makes the management of currency circulation by the Government and banks more complicated. In Vietnam, it is expected that there will be nearly 100 Fintech companies participating, requiring a legal mechanism to manage the activities of these companies. At the same time, banks also need to have documents to adjust and supplement principles in managing payment activities, international money transfers, regulations on providing payment services through intermediaries... to minimize many financial risks can occur. Besides, there are challenges in converting business models from traditional to digital technology banking business models. Business models, management and payment models may have to be reconsidered to match the trend of smart management of artificial intelligence, mobile banking models, paperless banking, digital banking, online paying; or the challenge of researching and maximizing customer experience in the payment field to meet the increasingly demanding needs of customers. In particular, with the increasingly sophisticated development of digital technology comes an increase in security holes, creating conditions for high-tech criminals to operate more and more frequently. In the field of payment, crimes in the field of high technology, card payments via POS, and electronic payments have recently had complicated developments with new and more sophisticated behaviors and tricks. Therefore, the common challenge for the entire Vietnamese banking industry and in particular for the payment sector in the context of Industry 4.0 is the issue of safety for the banking system, payment system and information security issue, about types of high-tech crimes, as well as challenges in qualifications, capacity,

quantity and quality of information technology staff.

4.3 Suggestions

From researching the effects of Fintech on payment services in commercial banks, the authors offer the following solutions for commercial banks to apply in practice in the coming time:

- The first, about legal issues: it is necessary to secure transactions in the system, add electronic payment forms, and develop new distribution channels. Using data and analytics to drive digital media campaigns and enhance customer experience are also important factors. And, most banks are looking to financial services providers to create value-added omnichannel solutions.
- The second: improve and upgrade the data security system. Accordingly, banks and financial institutions need to pay special attention to building data backup centers (recovering data after disasters); Upgrade the security system to a high level; Ensure the expansion of the scope of operations (if any) is stable, safe, and brings long-term effectiveness.
- The third: improving technology. Promote innovation and application of modern technologies through building and planning strategies for information technology development in the financial and banking sector. In particular, the throughout mission is to research and apply modern technological achievements of Fintech.
- The fourth: recruitment and training of human resources in the finance and banking industry. In particular, we focus on training high-tech human resources and increasing the ability to apply IT. Training and attention to the quality of high-tech human resources are carried out throughout the financial system.
- The fifth, when applying Fintech into operations, banks need to ensure that they build a control environment and apply complete and comprehensive risk management processes. The safety, soundness and stability of banks can be enhanced by implementing supervisory programs to ensure that banks have effective governance structures and clear risk management processes, thereby appropriately managing and monitoring the risks that arise related to Fintech.
- The sixth: cooperate with Fintech companies to create added value for customers. Issue connection standards between the banking system and Fintech companies and standardize regulations related to customer information security, information sharing and regulations on data network use.

5. Conclusion

It can be seen that Fintech has a strong impact on payment services at commercial banks from both positive and negative perspectives. In order for payment forms in banks to develop more and more, technology must come first, thereby applying advanced and modern techniques and technology to transaction and payment activities. Therefore, commercial banks are increasingly inclined to cooperate with Fintech providers in developing banking products and services to more quickly deploy digital solutions that consumers and businesses want after the Covid-19 pandemic.

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