

Original Article

Financial Technology in Commercial Banks: Situation and Solutions

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Abstract: *With the rapid advancement of information technology and the internet, everything from consumer behaviors and purchasing patterns to how commercial banks operate has changed. Applications of financial technology are being used in a wide variety of ways, which is impacting practically every aspect of commercial banking, including deposits, payments, insurance, securities, credit, and risk management, as well as the market and product structures and the Bank's long-term development plans. The banking industry is being significantly influenced and changed by Fintech. This article examines the idea, purpose, and content of applying financial technology to the commercial banking system and the state of that application at the moment. On that basis, propose a few solutions to increase the efficiency of financial technology applications in the banking system.*

Keywords: *Fintech, Commercial Bank, Reality, Solutions.*

I. INTRODUCTION

Thanks to the advancement of the internet and digital technologies in recent years, the finance and banking industries have seen fast growth (Wang et al., 2021). Blockchain, big data, cloud computing, the internet of things, virtual reality, artificial intelligence, and other cutting-edge digital technologies have changed the way that products and services are provided as well as how payments are made and how business processes are carried out (Elia et al., 2022; FSB, 2017). To increase their earnings, financial institutions are using more financial technology products. According to Lakuma, C. P. R. M. (2019), Fintech is a separate industry that has altered the structure of financial services, making them faster, less expensive, safer, more transparent, and more accessible.

According to Gomber P. et al. (2017), financial technology mentions to any digital instrument that contributes to enhancing, displacing, digitizing, or altering the current state of the conventional banking and financial business. Fintech enables seamless and better financial services in many respects, including new applications, new products, new business operations, and new models and processes for banks and users (FSB, 2017). Fintech applications have been changing the way consumers use financial products and services. Financial technology is also enhanced to increase bank productivity and performance, simplify financial transactions, and lower expenses (Diyani Lestari et al., 2021), assisting the Bank in expanding its activities and enhancing the Bank's overall performance (Campanella et al., 2022).

This change can also be seen in the commercial banking system in Vietnam, which has the fastest-growing smartphone usage in Southeast Asia. In addition, Vietnam had 77.93 million Internet users in January 2023, or 79.1% of the population; there were 161.6 million mobile devices, with an average of 1.64 devices per person (We are Social, 2023). A necessary and sufficient component in the advancement and use of financial technology in the banking industry in Vietnam is the shift in customer purchasing habits along with the accessibility of technology and the internet. At the same time, an active start-up and investment community and an increasingly supportive regulatory framework are important factors that play a supporting role and provide the necessary means for the development of the banking system as a whole and financial technology in particular.

On the other hand, research in banking and financial technology is currently focusing on a specific aspects such as security (Haitham M. Alzoubi et al., 2022), blockchain application problems (Cai, 2018), legal issues (Upik Mutiara et al., 2019; Mr. T., T., X., et al. 2020); study the impact of Fintech on the banking system (AlMomani, A. A., & Alomari, K. F., 2021); study the factors affecting customers' decision to use fintech services (Hang D.M et al. 2018). As a result, the goal of this research is to examine the existing situation and provide ideas for implementing financial technology in Vietnam's commercial banking system.

To assess the extent of financial technology applications in Vietnamese commercial banks, the article examines two categories of financial technology applications in commercial banks, including internal banking financial technology



applications and online banking services. The Vietnam Information Technology Application and Development Readiness Index (Vietnam ICT index), based on the UN EGDI index system, also includes this as a component content. The use of financial technology by commercial banks is covered by the research content. The two mentioned contents are the Bank's internal application and its online service, both of which function quite well and are rich in data, detailed with numerous components, and have correlation comparisons (Ministry of Information and Communication, 2021).

II. THEORETICAL BASIS

A) *Fintech's Definition and Functions in Commercial Bank*

Fintech transforms the financial services industry, consisting of one or more financial services delivered as a complete process over the internet. According to the Basel Committee on Banking Supervision (BCBS, 2018) and the Financial Stability Board (FSB, 2017), Fintech (Financial Technology) *is the application of technology in the financial sector*. Fintech refers to the innovative use of technology in financial services and operations. Technology is the driving force behind financial innovations, which substantially impact financial markets, financial institutions, and the supply of financial services by enabling the development of investment models, business models, process-changing applications, and products. To do tasks that are often performed by traditional banks, such as credit giving, payment processing, system application, and fund administration, Fintech businesses, on the one hand, use cutting-edge technology (Navaretti et al., 2017). Thanks to technology, fintech businesses employ big data, cut operating costs, guarantee transaction security, and revolutionize the financial banking industry. Fintech firms have emerged, and given their impact on the financial banking system, they appear to be commercial banks' competitors (Navaretti et al., 2017).

According to the 2010 banking law in Vietnam, "A bank is a financial institution and financial intermediary that accepts deposits and channels those deposits into lending activities, directly or indirectly through the capital market. Banks serve as a conduit between consumers who have capital deficits and those who have surpluses" (National Assembly, 2010). Banks serve as a bridge between capital providers and capital needers by overcoming the constraints of information asymmetry, agency costs, and credit size (De Young and Rice, 2004). In other words, commercial banks offer banking services and products in addition to carrying out monetary business operations. In other words, commercial banks carry out financial operations and offer banking goods and services. With that role, commercial banks are an important entity in the financial industry. Financially sound banks are better able to absorb negative shocks and add to the financial system's stability.

Fintech solutions in the banking industry are innovative developments in financial services based on technological applications used in the sector (Barroso & Laborda (2022) Arjun & et al., 2021). The concept of digital banking has many similarities with the approach to transformation processes/contents. According to Sharma et al. (2022), digital banking (Digital Banking) is a form of banking that digitizes all traditional banking activities and services. Depending on the degree of digital transformation, a bank converts all or part of its operations.

According to Navaretti et al. (2017), the content of financial technology applications in banking includes digital products and processes, new technologies applied to financial services, and increased customer access to finance. According to Bazot (2013) and Philippon (2015), areas of financial technology application in banking include peer-to-peer lending investment services, payment systems, insurance activities, and credit, deposit, and lending activities. Vives (2017) added Credit Scoring content, risk valuation, and bank-customer relationships are also improved.

Based on the aforementioned approaches to the content of financial technology solutions in banks, The Ministry of Information and Communications is implementing the measuring indicators in Vietnam in 2022. The following topics pertain to commercial banks' use of financial technology under the purview of this article: Applying financial technology within the Bank and using the Bank's online services under the following specified conditions:

a. **Bank internal application**

- Banks implementing core banking
- Banks deploying basic applications
- Banks deploying electronic payment

b. **Online services of the Bank: The online service component index provided to customers includes:**

- Website: Ensure the number of main news items, other items, and the frequency of website updates
- Internet Banking for individual customers
- Internet Banking for corporate customers
- Other e-banking services, including issued card numbers, electronic transactions, and transactions via ATMs and POS machines.

B) Necessity and goal of applying financial technology in commercial banks

Banks are aware of the critical role that financial technology applications play in enhancing customer experience, increasing work efficiency in internal governance, and optimizing bank operations in light of the advancement of financial technology and the emergence of numerous fintech companies (Agarwal S. et al. 2020). Customers serve as the foundation for commercial banks' use of financial technology. Some of the relevant hypotheses taken into account are:

- i. According to consumer theory, people will select goods that offer more benefits at a lower price. Consumer theory predicts that customers will select the best value-for-money product packages. According to Ky et al. (2019), a bank's profitability and efficiency rise along with customer contact and the creation of new client segments following the effective adoption of Fintech products in the Bank. The secret to offering business solutions is a collaboration between banks and Fintech. This was well illustrated during the time that the impacted nations of COVID-19.
- ii. According to information theory, a bank's primary function is to act as a financial mediator.

According to information theory, commercial banks serve as a bridge between those who have temporarily idle money and people who need to employ capital. Fintech helps banks overcome the information asymmetry that is the source of these hazards in the banking industry by enabling them to screen potential borrowers with big data-driven statistical models. Additionally, it may enable the Bank to attract more unsecured clients who will pay higher interest rates (Buchak et al., 2018).

- iii. Breakthrough Change of Theory (Elsaid, 2021).

According to the breakthrough change of theory, Fintech is an innovative business model that can use cutting-edge technology to deliver goods and services with superior quality and at lower prices to maintain a competitive position in the market (Christensen, 2013). When commercial banks implement financial technology into their operations, along with the inherent benefits of banks, they are approached from the standpoint of new business models and business practices.

- iv. Cheng, M., & Qu, Y. (2020) và Xihui Haviour Chen et al. (2021), in China; Research by Phan et al. (2019) in Indonesia and Inna Romnova et al. (2016) in Europe, financial technology applications in banking aim to accomplish the following objectives:

1. *Assist the Bank in adapting and diversifying its offerings to serve its clients better.* The application of financial technology initially modifies how banks conduct business and distribute their standard goods and services, such as payments, loans, money transfers, and deposits. By minimizing information asymmetries, using technology in lending aids banks in eliminating flaws in the credit market (R.P.J. Raapathirana, 2023). Additionally, the use of financial technology in banking enables the Bank to offer a wider range of services, including credit scoring, peer-to-peer lending (P2P lending), crowdfunding, personal finance, insurance technology, and insurtech. As customers increasingly access and use financial services and products online, banks increasingly embrace technology-based processes for their formal operations, such as money transfers, payments, savings, credit, and insurance.
2. *Assist the Bank in growing its customer base:* Traditional banking only accepts a finite number of customers from specific socioeconomic classes since consumers are judged on their asset ownership and recurrent income. Technology has made assessing credit and ascertaining a customer's financial status simpler. As a result, the Bank can increase the number of its clients. Instead of high service fees as in the past, low-income clients now have access to a greater variety of products and more banking services at lower rates.
3. *Help banks improve business performance:* applying financial technology to change traditional products and services and change the traditional distribution channels of financial products and services. Utilizing its natural advantages, the Bank will be able to provide financial products and services similar to those offered by independent financial technology companies. With fewer employees, fewer transaction documents, lower processing costs on the digital system, more clients, and lower operational risks, banks will operate more efficiently (WB, 2018).
4. *Help banks improve customer experience:* Consumers of financial products and services gain from both internal bank fintech development and collaboration with external fintech companies (Xihui H. Chen and colleagues, 2021). Banking technology solutions make the fundamental supply process easier to understand and more accessible to individual and business clients. In addition to the traditional channel through banks, the supply of financial goods and services through other channels results in a more diversified supply channel system with lower costs, faster speeds, and simplified procedures. The Bank's interaction with customers also becomes more convenient, improving the customer's experience with financial services. Big Data enables banks to analyze consumer behavior and gather information both inside and outside the institution. On this foundation, banks may lower costs, facilitate decision-making, and enhance service quality, adding value and raising customer happiness. Customers are arguably the ones who gain the most from the advantages of new technology.

III. RESEARCH METHODOLOGY

A) *Data Collection Methods:*

The authors used the method of document research to systematize the theoretical basis of commercial banks, the contents of applying financial technology in banking, and legal regulations as the basis for commercial banks' financial technology application activities.

An overview of theories of financial technology and application of financial technology in commercial banking. These studies conducted at home and abroad are selected by authors from databases such as Scopus, the online library of the State Bank, specialized journals, and a sample of 47 articles from 2004 to 2023. Key observations are thematically analyzed and analyzed through synthetic, narrative methods.

In order to study the current status of financial technology applications in commercial banks, the research team focused on considering the operational status of commercial banks, the current status of information technology applications and the digital transformation of banks. Commercial banks, the operational status of fintech enterprises and the influence of Fintech on commercial banks; customer needs for service quality improvement and service experience.

To assess the current situation, the article collects data on the number of commercial banks results of financial technology applications in commercial banks; the data in the article are collected from domestic and foreign books and scientific journals, from the aggregate data of the Department of Payment - State Bank of Vietnam; websites of commercial banks, current legal documents on commercial banks' operations, including basic operations, technology application, digital transformation. From the collected data, synthesize and select information suitable to the research content. The authors use a combination of descriptive statistical methods to clarify the situation. Along with that, the meta-analysis method is used to analyze, compare, and compare legal regulations, results and limitations in the application of financial technology by Vietnamese commercial banks.

Data processing method: The collected data are synthesized, calculated, and reflected by tables. To evaluate and analyze data, the article also uses the method of comparing and analyzing the results of financial technology applications in Vietnamese commercial banks (according to 2 groups of contents: internal application of the Bank and Online services of the Bank). From there, the research team proposed solutions to enhance the application of financial technology in the Vietnamese commercial banking system.

IV. CURRENT STATUS OF FINANCIAL TECHNOLOGY APPLICATION OF COMMERCIAL BANKS IN VIETNAM.

Over 30 years of establishment and development, Vietnam's commercial banking system has constantly developed in terms of scale, quality and operational efficiency. As of 31/12/2021, Vietnam's commercial banking system has 46 banks, including 4 state-owned commercial banks, 31 joint-stock commercial banks, 9 banks with 100% foreign capital, 2 joint venture banks (State Bank of Vietnam, 2023). So far, Vietnam's banking system has grown in both quantity and quality, meeting the development requirements of the economy and increasingly asserting its role in economic development (Nam, N., H., 2022). With the inevitable roles and trends of digital transformation, along with a large customer database, the application of financial technology in banking operations is the choice of all commercial banks (Hoe, PX, 2020).

In general, Vietnamese commercial banks are mostly at the stage of partial transformation, including transforming processes and communication channels, especially new data platform transformation implemented at some pioneering banks (Hoe, PX, 2021). As follows:

A) *Internal Bank Application*

Applications that change the Bank's processes, operations and management include bank management, how bank staff work, data management, data sharing via API, and building a risk management framework. These applications are present in many commercial banking activities: payments, peer-to-peer lending, transactions, and applications (Digital Economy Development Strategy Institute, 2023). By the end of 2022, the banking industry will invest more than VND 15,000 billion in digital transformation activities and make Vietnam one of the leading digital banking application countries, with a growth rate of 40% in digital payments over the past 3-4 years. However, the level of adoption is largely at the level of decentralization and service sharing (Trinh B. V. et al., 2022). The majority of domestic banks in Vietnam have implemented digital banking at the transformation level in terms of processes and communication channels; only a few banks have digitalized the data platform (Nguyet L., A., 2019). According to general statistics, 94% of banks initially implemented or are researching and developing digital transformation strategies, and 59% of banks have started implementing digital transformation in practice. The majority of Vietnamese banks have implemented digital banking at the transformation level in terms of communication channels and processes. (UK, NT, 2020)

On September 6, 2021, the government passed resolution 100/NQ-CP on the adoption of the proposal to develop a Decree on the mechanism for controlled testing of Fintech activities in the banking sector. It is expected that the trial period will last from 1 to 2 years, and focus on:

- Peer-to-peer lending
- Granting credit on technology platforms
- Data sharing via API application programming interface
- Credit scoring

The premise for the mechanism for testing financial technology activities in the banking sector is the application of technology in digital banking transformation, aiming to improve the Bank's operational efficiency and enhance customer experience. Applicable banking and financial technology pillars and services include:

Table 1: Pillars and Corresponding Financial Services

| Pillars | Financial Services Products | Application products in banking |
|--|--|---|
| Digitizing the identification system, simplifying account opening and developing a population data digitization (e-KYC) system | Open online accounts, save online, score online credit, P2P lending (peer-to-peer lending activities), Bigdata, BI. | Open an online account and save online. |
| Interconnection of electronic payment activities | E-wallets, Mobile banking, internet banking, mobile money, cardless withdrawal, microinsurance, digital ecosystem (financial supermarket) | Internet banking, cardless withdrawal, microinsurance |
| Development of Government payment and public services activities | Pay fees, taxes, online social insurance, social allowances, and online public products and services. Using the app to share information, subsidize social insurance for people through private proof and technology | Pay fees, taxes, and social insurance online Social assistance payments |
| Digitizing financial systems and markets, facilitating easier access to financial and investment activities | - Digital banking products and services: deposits, automatic consumer loans, digital payments - Investment finance: trading platforms such as Forex, gold exchange, portfolio management, investment consulting via AI ... - Insurance: Insururetech, data, purchase, payment fees | Digital banking products and services: deposits, automatic consumer loans, digital payments |

Source: Hoe, PX (2020) and author's synthesis

While innovations in banking are encouraged, it is unclear how much they are being adopted and ready to integrate into multiple bank channels, from process automation and enhanced customer experience (AlMomani & Alomari, 2021). The advantage of the Bank is that it has a long history and brand, has an extensive network of operations, and can leverage its access to a large amount of consumer information and transaction data available on a large scale to minimize credit risk, thereby creating better business performance than independent fintech businesses (Sheng, 2021). This advantage is combined with new technology, making the operating model more dominant than the traditional one. However, to optimize efficiency in technology application, 81% of banks choose to cooperate with independent Fintech businesses, 56% of banks choose to develop their fintech products, and 50% choose to participate in the joint cooperation program on fintech development (State Bank of Vietnam, 2018). In fact, 72% of banks have linked up with fintech businesses to provide financial products and services. (Institute of Banking Strategy, 2019). Specific results of two contents of financial technology application in banking are as follows:

B) Online Banking Services:

Until now, financial technology has been present in the majority of financial services products offered by banks. Technology solutions are applied in the entire process of receiving deposits, granting credits, and providing payment services (Digital Economy Development Strategy Institute, 2023). Digital banking services has allowed customers to access and fully use banking utilities and services (such as money transfer, bill payment, insurance premium, overdraft loan, consumer loan, Check balance ...) and extra-banking services (such as delivery, car booking, flight booking...) anytime, anywhere right on personal smartphones implemented by the Bank with a user-friendly interface, easy to use and constantly upgrading (Nguyet L. A., 2019).

Table 2: Domestic Payment Transactions Via Internet and Mobile Banking Q1, 2023

| Quota | Number of transactions (items) | Transaction value (billion dong) |
|-----------------|---------------------------------------|---|
| Internet | 458.193.431 | 13.390.761 |
| Mobile Banking | 1.586.882.376 | 12.282.451 |
| ATM* | 247.420.121 | 746.434 |
| POS/EFTPOS/EDC* | 173.370.603 | 294.556 |

Source: Department of Payment- State Bank of Vietnam, 2023

Notes: *Number of transactions at ATMs or devices POS/EFTPOS/EDC includes both banks and credit institutions, including cash withdrawal transactions, transfer transactions and other transactions (time savings deposits, payments between credit institutions and customers).

At the end of Quarter 1, 2023, the total number of domestic cards in circulation is 113.07 million, and the total number of international cards is 32.8 million. Number of devices POS/EFTPOS/EDC is 430,625 devices, the number of ATMs is 21,347 ATMs (Department of Payments- State Bank of Vietnam, 2023). By the end of 2022, 40 banks have officially implemented the eKYC payment account opening process with more than 11.9 million active eKYC payment accounts; 22 banks are officially opening eKYC cards, with nearly 10.8 million cards opened by eKYC in operation. In addition, by April 2023, the State Bank of Vietnam has cooperated with the Ministry of Public Security (C06) to complete the authentication of more than 25 million borrower credit information with the national database on population. (Digital Economy Development Strategy Institute, 2023)

In addition to Internet Banking and Mobile Banking, some banks and information technology companies have researched, cooperated and applied technologies on mobile phone devices, such as the application of fingerprint authentication, facial recognition, biometrics, QR Code, Tokenization, contactless payments, mPOS..." technology. Up to now, in Vietnam, more than 41/46 commercial banks have provided mobile payment services, with the number and value of transactions continuously increasing rapidly (Digital Economy Development Strategy Institute, 2023). To enhance connectivity and user experience, some banks (MB, Techcombank, etc.) have applied artificial intelligence technology and machine learning and offer 24/7 automated consulting services on banking websites or social media channels. Payment channels are also expanding and diverse. Some other services are only provided by a few banks, such as investment (Agribank, Techcombank), online shopping (Agribank, Vietinbank), and social media transfer (Techcombank) ...

However, the above services are still designed and provided discretely, not fully linked to all services of the Bank and lack of interaction between suppliers and customers. The Bank's distribution channel is still dependent on the traditional banking model. This stems from the difficulties of incomplete legal corridors; Investment costs for technology systems and development of new products and services are huge; The technological system between banks is not homogeneous; The infrastructure for digital banking development is still inadequate... (Digital Economy Development Strategy Institute, 2023)

V. SOME PROPOSALS TO ENHANCE THE EFFICIENCY OF FINANCIAL TECHNOLOGY APPLICATION OF COMMERCIAL BANKS IN VIETNAM

A) Firstly, Finalize the Policy

The Government continues to concretize the Party's guidelines and the Government's instructions on promoting the sharing economy and information technology applications in banking and financial activities. The Government proactively grasps the practical needs of people, businesses and commercial banks to develop legal documents suitable to reality, facilitating the application of financial technology in business activities and providing banking products and services to improve operational efficiency and create customer satisfaction and attachment. To realize the goal of encouraging innovation and modernization in the banking sector towards financial universalization; Create a testing environment for fintech application in the banking sector; the Government's early promulgation of the Mechanism for Controlled Testing of Financial Technology (Fintech) activities in the banking sector, successively in other fields. The legal framework, mechanisms and policies for the banking industry's non-cash payment activities and digital transformation continue to be reviewed, supplemented, and perfected, creating synchronization and favorable conditions for development. Cashless, applying new technology and ensuring security and safety in payment activities. The Government needs to complete policies and policies stipulating obligations and sanctions to handle violations, regulations on information security and financial safety for customers to limit risks to consumers and the market, thereby protecting the interests of customers.

In addition to perfecting the law, the Government should continue to promote investment and development of the industry's shared infrastructure, such as payment infrastructure and credit information infrastructure. Upgrading information technology infrastructure is the basis for deploying and applying solutions to ensure security and confidentiality in banking activities and enhancing the ability to connect and integrate services between the banking industry and the banking sector—

other industries and sectors. In particular, priority is given to connecting and exploiting the national database on population according to the coordination plan between the State Bank and the Ministry of Public Security to clean data, authenticate customers and applications, deploy security services, and deploy other services—banking operations.

B) Secondly, Changing the Perception of Financial Technology Applications in Banking.

Recognizing the issue of fintech applications in the banking sector and the role of cooperation between banks and fintech businesses in the current technology boom period will help the Bank catch up with the development trend of the financial market. The emergence of integrated shopping portals, social channels and mobile apps has opened up opportunities for banks to reach out to their customers. From there, bank administrators and policymakers will develop effective business strategies, helping the bank move in the right direction and develop sustainably.

C) Thirdly, Prepare the Process and Technology to make use of National Credit Information Data.

In 2023, the State Bank of Vietnam coordinated with the Ministry of Public Security to check and clean 25 million customer records in the national credit information database. Currently continuing to review and clean 26 million customer records, expected to be completed by the end of 2023. The national credit information database will facilitate the provision of credit scoring and authentication services. Government, applying biometrics, strengthening dealing with data abuse, and implementing fraud.

D) Fourth, Strengthen the Application of Fintech In Banks.

In order to improve the efficiency of a thorough application of technology to banking business activities, especially diversification such as diversifying products and services, expanding customers, especially customers in remote areas, individual customers. Banks need to improve the efficiency of using investment capital for technology. This solution is implemented through many specific solutions, such as:

The Bank establishes a specialized technology investment department, conducts market analysis and forecasts, determines the level of investment payback period, and assesses the benefits brought to the Bank to avoid causing capital losses.

The Bank may purchase technology software from domestic and foreign partners. Banks can choose technology software of domestic partners, such as FPT VDC ... to save costs. Automated identification and information separation technology helps banks shorten the time it takes to open customer accounts. This technology allows you to automatically separate the necessary field information on the account opening application form, fill this information in the pre-installed form, and then upload it to the system to check and return the results of the member's transactions. This helps to reduce information processing time and, simultaneously, to reduce manual labor and sorting, sorting, and searching. In addition, character recognition technology is integrated into the digitization solution that can compare documents with each other, thereby warning out data differences between records during manipulation, helping to automate handling difficulties and risks for the Bank.

The Bank strengthens cooperation with fintech companies to diversify financial products and services such as payment, loans, personal financial consulting, investment, insurance, etc., to attract customers.

The Bank shall improve the use of information technology for its staff to exploit technology's effectiveness fully. Banks can add information technology requirements in job descriptions and standardize entrance recruitment conditions to recruit qualified employees to use technology. Banks can organize classes to improve skills in using information technology, including training on operation ability, management of e-banking operations, and ability to respond and promptly handle incidents for customers in fintech applications.

The Bank strengthens advertising and marketing to encourage customers to access more and more electronic products and services of the Bank, continue to promote communication to customers in many forms to guide and raise customers' awareness and understanding about financial technology in the Bank and note and warn to assist customers to recognize, prevent and avoid risks when performing transactions in the electronic environment.

The Bank optimizes business processes by automating previously manual processes. The processes are set up closely and flexibly, following the standards of each department to help ensure continuity when working and improve efficiency—some contents in the internal management process, such as human resource management.

VI. CONCLUSIONS

Recognizing the important role of financial technology, Vietnamese commercial banks apply financial technology in their operations, including (1) Internal banking applications. These are applications that change processes, data management methods, human resource management, data sharing via APIs, Risk management framework building, etc. (2) Online banking services. The development of financial technology changes the traditional products and services of banks and changes the way

they distribute financial products and services. That has helped customers to access and use fully banking and non-banking facilities and services, improve customer experience, and change and diversify banking products and services. However, due to the difficulties of inadequate legal basis, large investment costs, and heterogeneous technology systems between banks, the above services are not currently linked to the entire service of the Bank. The Bank's distribution channel is still dependent on the traditional banking model. Based on the results of synthesis and analysis, the authors propose some recommendations to enhance the application of financial technology in commercial banks in Vietnam. Future studies may focus more on the technological aspect or be limited to a specific commercial bank and study in more detail, using modern research methods, combining qualitative and quantitative research methods to have more comprehensive, complete and profound analyses on this topic.

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