

Research on the Digital Transformation Development Strategy of Commercial Banks under the Background of Financial Technology

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Abstract: At present, implementing digital transformation has become the most common strategic choice of commercial banks, so it is important to study the digital transformation of commercial banks. The literature on Fintech and the digital revolution of conventional commercial banks is reviewed in this paper. This paper reviews the theoretical and empirical literature, focusing on three main issues: the influence of financial technology on commercial banks, the research on digital transformation of commercial banks, and the factors affecting the digital transformation effect of commercial banks. The vast majority of scholars believe that the use of financial technology can bring customers a more personalized service experience, reduce costs and increase profit levels, but it also means that the competitive environment for commercial banks will be more intense. According to the current development of science and technology, commercial banks must put digital transformation into practice in order to achieve sustainable development, and financial technology plays an indispensable role in the digital transformation of the banking industry. With the continuous advancement of digital transformation practice, many factors affect the implementation of digital transformation, including external factors such as government support, and internal factors such as the development of science and technology, digital transformation strategy formulation, and managers' awareness. This paper summarizes what people know about these issues and the questions for future research. People should look for more possible factors that will affect the digital transformation of commercial banks, and study the security issues that may arise from the benefits that digitalization brings to commercial banks.

Keywords: fintech, digital transformation, commercial bank, factors

1. Introduction

Payment and settlement, deposit and loan and capital raising, investment management, and market infrastructure are included in the Basel Committee's four classifications of the primary application fields of Fintech. At this stage, financial technology has gradually changed to be based on the "technology +finance" field, and the financial infrastructure has been reformed and upgraded on the basis of the new financial business model derived to serve the current financial industry. Various industrial models have shown the characteristics of "intelligence", including Internet credit

reporting and digital currency. To sum up, the new business model is mainly based on "ABCD" (Artificial Intelligence, Block Chain, Cloud Computing and Big Data). In terms of technology, the boundaries of technology application are gradually blurred, and they are more closely connected in different fields. In terms of ecological construction, Fintech uses sophisticated computing to achieve efficient matching between capital and asset ends, continuously optimize the ecological model, and help the creative expansion of the finance sector.

Nowadays, the internet economy is booming, and the banking industry in all countries has generally recognized the importance of digital transformation and the development of financial technology. Under the impact of the COVID-19, commercial banks began to apply financial technology explosively. In order to resist the epidemic, many offline economic activities have to be carried out online. Banks have more urgent needs for "zero contact" services and have more profound awareness of the changes in financial technology and services. Therefore, all banks have a stronger desire to improve their technological and financial strength, and have further unified the goal of promoting business development and improving service level through financial technology. At the same time, digital technologies such as big data, AI and Block Chain are also developing rapidly, improving quality and efficiency in the process of bank transformation. Each bank is actively building an intelligent digital financial service system. Take China as an example.

According to the summary of investment and financing events in China's banking industry from 2017 to 2022, in recent years, banking investment and financing have mainly focused on financial technology and digital transformation, and the invested entities are mainly digital industry-related science and technology innovation companies such as big data, machine learning, databases, data analysis and management platforms. From 2017 to 2022, the types of investment products in the banking industry tend to be concentrated. The proportion of investment events in cloud computing and database-related fields has gradually increased, and the proportion of investment events in intelligent identification related fields has gradually decreased. It shows that the current demand of the banking industry to conduct more comprehensive analysis of the data provided by customers for precision marketing and improve service experience still exists, and the banking industry needs to continue to launch diversified financial innovation products. The banking industry has a long-term demand for the computing power, data management, and analysis, so the proportion of investment events in the fields of database and cloud computing has gradually increased, and this demand is expected to continue for several years in the future.

The digital economy is driving the development of the global economy and is the key force of social change. The digital transformation of commercial banks has become an irreversible trend. The digitalization of commercial banks is conducive to improving the ability and level of serving the real economy and improving the efficiency of serving the real economy. Digital transformation has become the preferred strategy for commercial banks to enhance their core competitiveness, so it is very important to study the digital transformation of commercial banks. At present, there is a general consensus in the academic circles of many countries that considering the rapid growth of financial technology, commercial banks must carry out digital transformation. However, the road to digital transformation is full of difficulties, so it is a must to find the starting point of digital transformation in combination with the national macroeconomic situation and the current situation of scientific and technological development, as well as the actual situation of the bank itself.

2. Definition of Fintech

Fintech was first proposed by Citibank in 1993 and it is a synthesis of "Finance" and "Technology". In recent years, not only practitioners in the financial industry, but also managers, consumers and decision-makers in different fields have paid great attention to Fintech. Today, the meaning of financial technology is not limited to the computer technology of financial institutions, and its

definition is more complex. Schueffel obtained a concise and clear definition of Fintech through semantic analysis: The emerging financial sector known as "Fintech" uses technology to enhance financial operations [1]. Some organizations have also put forward their official definitions. Philippon believes that Fintech encompasses technologies that support digital innovation and innovation in business models in the financial sector, which can promote the development of industries and democratize financial services [2]. Financial technology is also thought to be a new fusion of technology and financial services, and its advancement can increase the effectiveness and accessibility of financial services. By analyzing the development and change of fintech over the decades, Ross put forward the idea that it is feasible to create a thorough topology of the Fintech sector [3]. Wu believes that Fintech can be divided into three areas: internal digitization, provider-oriented digitization and customer-oriented digitization [4]. Fintech is defined by the Financial Stability Board (FSB) as a technology-based innovation in financial services that can lead to new business models, applications, processes or products that significantly affect how financial services are delivered.

The primary focus of this paper's concept of Fintech is the use of information technology to provide both new and enhanced financial services.

3. Research on the Impact of Financial Technology Development on Commercial Banks

At present, with the rapid development of digital technology, the global banking industry has invested more and more financial, material and energy in the integrated development of finance and technology. In the discussion of the effect of financial technology on commercial banks, the academic community has conducted a wealth of research.

Some scholars believe that the development of financial technology has a certain impact on commercial banks: The entry of financial technology companies can bring more personalized service experience to users, which is more cash than traditional banking services. Young believes that Internet companies can improve service efficiency, reduce costs and improve profit levels [5]. Fintech is a technological innovation model for the business transformation and development of financial institutions of traditional Chinese banks. The blossom of the financial industry after the emergence of Internet finance uses technology to make changes, making business development faster and income higher. Reasonable use of financial technology can improve the service level of commercial banks, and both promote and coordinate development.

Financial technology has brought challenges to commercial banks as well as opportunities. With the rise of digital currency, financial technology has had an impact on the bank payment systems. Wonglimpiyart proposed a system innovation model, and through this model study, it was concluded that commercial banks increased the effectiveness of financial services through financial technology under the background of the ongoing development of financial innovation, but at the same time other financial institutions also accelerated the innovation of financial technology, leading to a more intense competitive environment for commercial banks, which had a greater adverse impact on commercial banks [6]. Besides, Fintech companies have flooded into the financial sector and taken advantage of the gap between the new demanding of customers and some outdated services offered by traditional banks to unbundle banks' value chains through Fintech. They exhibit drastically redefined business models that are highly disruptive to traditional paradigms, so it is believed that technological progress has promoted the integration of financial resources and intensified market competition [7].

At the same time, scholars generally believe that financial technology has brought more beneficial effects to commercial banks and is an opportunity for commercial banks to change. Fintech could innovate the service model of traditional banks and optimize and upgrade it to enable service intermediaries to obtain more comprehensive and systematic information, thus improving

the quality and efficiency of financial services, alleviating the problem of information asymmetry, and improving the operational efficiency of commercial banks, but should pay attention to data security and strictly prevent data leakage. Ferrari pointed out that a new digital competition marked by financial technology has begun, which not only involves technological change, but also expands existing channels, which will overturn the entire banking industry and have a huge impact [8]. Some scholars also studied and put forward the Low margin, Asset light, Scalable, Innovative, and Compliance easy (LASIC) principle to help commercial banks stand out and keep ahead in the fierce competition [9].

In addition, some scholars have done some research on how financial technology impacts the primary business of commercial banks, especially retail business. Brews and Tucci believed that commercial banks should outsource their non-core businesses to other service institutions to focus resources on promoting the development of their core businesses and enhance their comprehensive competitiveness [10]. Under the current financial technology background, traditional commercial banks must recognize the gap and limitations between themselves and online finance, and actively innovate products and services through building a big data platform to improve the profitability of banks.

4. Research on Digital Transformation of Commercial Banks

Scholars have studied the reasons why commercial banks must carry out digital transformation: Gurbaxani and Dunkle mentioned that in the process of modern globalization, commercial banks have to carry out digital transformation so that they could achieve the trend of sustainable development, which is also an important opportunity for IT enterprises [11]. Cuesta and Ruesta's research show that human financial behavior habits are constantly changing with the progress of society, and new service methods are also emerging [7]. At the same time, financial technology companies are actively committed to applying more and more cash technologies, opening the prelude to technological competition with commercial banks. Due to the superposition of the above two reasons, traditional commercial banks must be aware of the gap and limitations between themselves and online finance, and actively innovate products and services by building a digital platform or carrying out digital to improve their profitability.

Many scholars have studied how to carry out digital transformation and where to focus on digital transformation. First of all, the corresponding goals should be formulated, the goals of digital transformation should be clear, different enterprises at different stages of development, should have different development goals [12]. The second is technology selection. Big data, artificial intelligence and other technologies are constantly developing and mature, and it is necessary to choose the technology suitable for us and gradually carry out digital upgrading. Finally, the participation of digital transformation is actually the in-depth cooperation between business and technology, and the management and employees of the bank should have the awareness of digital transformation and understand the meaning and purpose of transformation [13].

5. Factors Affecting the Effectiveness of Digital Transformation

At present, the practice of enterprise digital transformation has been continuously promoted. Many scholars have studied the factors of digital transformation. People realize that many internal and external factors affect the implementation of enterprise digital transformation, and these elements significantly influence the digital transformation. Zhang believes that the factors affecting digital transformation can be divided into external factors and internal factors, among which external factors can also become environmental factors, and internal factors can be divided into two parts: technical factors and organizational factors [13]. In terms of environmental factors, the role of

government support is important in digital transformation, especially for small and medium-sized enterprises which do not have many resources and funds. Chen also mentioned that government support is also an important factor [14].

The second is internal factors. Gurbaxani and Dunkle pointed out that technology and organizational structure are the critical factors affecting the digital transformation of enterprises [11]. The importance of technology for digital transformation is self-evident. Technology is at the heart of digitalization. Supporting technologies that rely on digital maturity can foster innovation and sustainable digital transformation, help businesses restore resilience and stability, and increase competitive advantage [12]. It is also believed that the key to organizational factors mainly lies in management, and management needs to have digital transformation awareness, digital transformation acceleration and digital transformation coordination, which together constitute organizational factors [13]. For small and medium-sized businesses, information technology, employee skills, and digital strategy are three important drivers of digital transformation, and digitalization can also drive a reversal in the company's performance. One of the key factors in the course of digital transformation is that the various processes of the organizational function can be combined with digital technology to achieve "digitalization", but simple combination cannot achieve digital transformation well, and more importantly, timely update and develop the digital strategy [12].

Strategy is positioning, direction and goals, and digital strategy is to answer how to achieve goals through technology and IT. At different stages of digitalization, corresponding digital strategies should be proposed to accelerate transformation. The development and introduction of digital business strategies was beneficial to increase digital maturity and emphasized the importance of technology-oriented digital strategy development [13].

6. Conclusions

As can be seen from the above literature that the academic community has conducted a lot of research on the application of financial technology, the digital transformation of commercial banks and the influence relationship between the two. At present, Fintech is developing rapidly, the global banking industry is investing more and more money in the field of Fintech, and in the current environment, commercial banks must carry out digital transformation in order to fully achieve sustainable development and enhance competitiveness. Through combing and summarizing the above literature, it can be found that the relevant research in the field of financial technology has been relatively mature. Regarding the digitalization of commercial banks, many scholars pointed out the reasons why banks must carry out digital transformation and the focus of transformation, and also analyzed the pivotal influencing factors and possible difficulties of digital transformation.

This paper combines the digital transformation of Fintech and commercial banks, explore the path and possible difficulties in the process under the background of continuous development of Fintech, and further analyze the application prospect of Fintech in promoting the digital transformation of commercial banks in combination with the future technology frontier.

In the existing research, most of the literature revolves around the influencing factors of digital transformation, and mainly around the three factors of technological development, government support and management awareness, but does not add more possible factors such as talent training, cooperation between banks and Fintech companies, corporate culture and other factors. In future studies, more possible influencing factors can be added to the relevant models and the correlation between these factors can be studied. In addition, most of the literature mainly focuses on the beneficial impact of digitalization on enterprises and banks and does not mention the hidden dangers that may bring, and future research can focus on this part of the research, such as information network security, data management and other issues.

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