

# The Transformation and Development of Traditional Commercial Banks Helped by Financial Technology

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**Abstract.** With the rapid development of financial science and technology, the Internet financial industry has attracted a large number of financial customer groups with its advantages of convenience and high income, which has a huge impact on the business of traditional commercial banks in China. But at the same time, financial technology also brings many opportunities for the development of commercial banks. Under the pressure of transformation and development, in recent years, major listed banks have paid more and more attention to the application of financial technology in risk control, product and service innovation, and began to actively explore and realize digital transformation. Based on the overview of the current situation of the development of financial science and technology, this paper mainly analyzes the opportunities and challenges faced by the transformation and development of commercial banks under the background of financial science and technology, summarizes the current situation of the combination of traditional commercial banks and financial science and technology in China, and puts forward reasonable suggestions for promoting its better development.

**Keywords:** financial technology; commercial bank; transformation and development.

## 1. Introduction

### 1.1 The Overview of Financial Technology

Financial science and technology (Abbreviated as Fintech) in a broad sense refers to the application of science and technology in the financial field, so that the two organically integrate. In a narrow sense, it refers to the comprehensive upgrading and innovation of products or services provided by financial institutions through the introduction and development of new technologies and the use of information technology, so as to save manpower and reduce costs while improving efficiency. At present, the mainstream financial technology we are talking about mainly includes big data, blockchain, artificial intelligence, Internet of things, cloud computing, etc.

### 1.2 The Main Technical Means

(1) Big Data. Big data refers to the collection of data that is difficult to be collected, sorted out, processed and analyzed by common software tools in a certain period of time. It has a large number of diverse characteristics, through the new processing mode can play a more powerful optimization ability. In recent years, big data technology has been developing. The financial industry analyzes the basic information of users through a huge database, and obtains the rules and correlation between data and information. And it is applied in financial services such as sales and credit to improve the accuracy of marketing and provide more advanced technical means for the development of the financial industry.

(2) Block Chain. In essence, blockchain is a decentralized data system. It uses block linked data structure to store and verify data, and uses smart contracts to replace the original intermediaries to program and process data. Thus, it has the advantages of higher data quality, lower acquisition cost, faster transmission speed, stronger openness and transparency, and better security credibility.

(3) Artificial Intelligence, abbreviated as AI. Artificial intelligence is the use of computer systems to simulate human thinking process in a certain aspect, as well as learning, reasoning, planning and other intelligent behaviors. Through the construction of artificial system with certain intelligence, the computer can realize higher-level application, realize the work that needs human to complete in the past, and greatly save the cost of human resources and optimize the work efficiency.

## **2. Opportunities and Challenges for the Transformation and Development of Commercial Banks under the Background of Financial Science and Technology**

Alipay and WeChat have become the most popular way of payment nowadays with the popularity of Internet and smart phones. Because of its convenient and easy to operate advantages, transaction volume and transaction frequency have been growing rapidly in just a few years, which has an impact on traditional businesses such as bank payment, deposit and loan. The decrease of the transaction frequency of traditional bank's swiping card forces commercial banks to develop new business and optimize their settlement and transfer functions. Secondly, the role of commercial banks as credit intermediaries in society is gradually weakened by financial technology. Social fund providers can directly provide their own loanable funds to the public through the financial platform on the Internet, and fund demanders can also choose to realize financing on the Internet platform, which bypasses the traditional commercial bank as an intermediary channel and leads to the phenomenon of financial disintermediation. The interest margin of deposit and loan is the basic profit source of traditional commercial banks. However, the emergence of financial disintermediation makes the interest income of deposit continue to decline, further reducing the profit space of traditional bank deposit and loan business. In addition, the emergence and development of Internet financial products with the characteristics of high-yield and low restrictions also have a huge impact on the deposit business of commercial banks. In addition to the limitations of commercial banks' own products, the competitiveness is declining, and the market profit space is shrinking.

But at the same time, if we can make good use of financial technology, commercial banks will have a huge development advantage.

### **2.1 Expand Customer Coverage.**

For a long time, the bank products do not meet the needs of customers, which will inevitably make the competitiveness of commercial banks decline, resulting in the loss of customers. Financial technology can enable commercial banks to better data mining and analysis, carry out personalized services for different customers, improve customer experience, realize the innovative development of their products and services, and make financial services cover the long tail customers that are difficult to be covered by traditional finance.

### **2.2 Cost Reduction.**

Commercial banks can apply artificial intelligence technology to enrich online financial service products through mobile app, online banking and other channels, which is more convenient and efficient. It can not only improve customer satisfaction, expand customer coverage, but also relatively reduce the number of physical business outlets to achieve cost control.

### **2.3 Effectively Reduce Financial Risks.**

The application of big data analysis technology and blockchain technology can establish a more perfect risk management system, reduce information asymmetry and improve the security of financial business. Especially in the credit business, the perfect data analysis model of capital flow is helpful to find out the abnormal data in time and take relevant strategies to reduce the business losses of commercial banks as much as possible and avoid financial risks.

## **3. The Current Situation of the Combination of Traditional Commercial Banks and Financial Technology in China**

Facing the strong impact of financial technology, many traditional financial institutions have been aware of the urgency of reform and transformation. We began to gradually increase investment in financial science and technology, actively explore emerging technologies such as blockchain and artificial intelligence, work with cloud manufacturers, pay attention to the absorption of scientific and

technological talents, and constantly improve our scientific and technological strength. For example, in terms of product innovation and improving customer experience, China Construction Bank launched the "CCB will understand you" App.. The one-stop financial service platform for inclusive financial customers based on big data and biometric technology was constructed, and the online one-stop process of "small quick loan" of CCB was realized. Through the application of big data and computer algorithm, China Merchants Bank released the first intelligent investment adviser in China, "Capricorn intelligent investment", relying on the huge customer and product data of China Merchants Bank to help investors build the optimal fund and financial portfolio, which opened a new stage of banking financial services. Shanghai Pudong Development Bank has cooperated with Baidu and China Mobile, successfully launched the "digital person" plan, and applied artificial intelligence, perception technology and data-driven technology to build a digital person with the ability of intelligent perception, intelligent interaction and intelligent analysis. And it will be applied to app, online banking and various mobile terminals of SPDB to inject new energy into financial services. In the aspect of risk control and management innovation, Bank of Xi'an collects a wide range of data sources, such as internal data, customer data, third-party data, etc., establishes risk assessment decision-making model by using big data technology, and makes scientific decision and pricing based on risk assessment. Moreover, the risk monitoring and early warning system based on data is improved, and the purpose of "real-time monitoring, dynamic early warning and auxiliary decision-making" is realized.

In a word, in recent years, the position of financial science and technology in the transformation and development of commercial banks has been continuously improved, and each commercial bank has made great progress in promoting the transformation and development by applying financial science and technology.

## **4. Suggestions on the Transformation and Development of Traditional Commercial Banks**

### **4.1 Pay Attention to the Training of Financial Science and Technology Talents and Increase the Research and Development of Financial Science and Technology.**

In the process of development, commercial banks must build a good Internet thinking. To have a deep understanding of the development trend of financial science and technology, and put forward an accurate direction and positioning for the future development of the bank. In order to improve the electronic information management level of commercial banks, we should increase the investment of information technology and actively carry out the information construction according to our own development situation and the current environment of financial science and technology. At the same time, strengthening the construction of financial technology related talents is the most important development foundation. At the same time of introducing mature high-tech talents and shortening the gap in the research of financial science and technology, commercial banks should also increase the investment and training of compound talents to create a group of compound talents. In view of the long R & D cycle and large R & D investment of fintech, those enterprises with large scale and strong strength can independently develop fintech. For those small and medium-sized enterprises, they can choose to purchase relevant services from outside or actively cooperate with fintech enterprises.

### **4.2 Guard Against Financial Risks and Safeguard the Bottom Line of Financial Technology Security**

Due to the high density of bank information, once a technical link appears deviation or suffers malicious attack, it will lead to a large number of customers' private information leakage, which will bring serious consequences to the whole economic society. Therefore, in the process of using financial technology, commercial banks must ensure that the internal management system is always in an effective state, and ensure the security of capital and data information. At the same time, commercial banks should establish regular risk assessment mechanism, set up special emergency

plans for financial science and technology, check the operation loopholes of financial science and technology, and strictly prevent the cross penetration of financial science and technology risks.

#### **4.3 Abide by the Laws and Regulations of the Financial Industry and Maintain a Harmonious and Orderly Development Environment**

At present, the development of financial science and technology is not perfect, and the relevant regulatory system also has shortcomings. Relevant government departments should build a complete financial system industry standardization specification as soon as possible, and strengthen supervision, including the formulation of technical standards and specifications for demand preparation, data management, development testing, emergency assessment, it audit and other aspects, so as to gradually achieve the goal of financial science and technology risk prevention and control. As an important part of the financial market, commercial banks should also strengthen communication with the government, consciously abide by the relevant laws and regulations, and actively use legal weapons to solve the financial science and technology risks.

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