

# Analysis of the existing problems and countermeasures in China Merchants Bank's development of fintech

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**Abstract:** The development of financial technology a traditional commercial banks to change the business operation mode, the road to the future, for traditional commercial banks to complete the transformation to adapt to the increasingly complex market environment has an important role. This paper takes China Merchants Bank, which is currently an excellent developer in the field of financial technology, as the research object, and based on the systematic combing of the relevant literature on the development of financial technology in China Merchants Bank, it studies in depth the current situation of the development of financial technology in China Merchants Bank, the existing problems, and puts forward suggestions. It is found that China Merchants Bank's fintech development is in the leading position among traditional joint-stock commercial banks, and the development of fintech effectively promotes the optimisation and upgrading of its business structure, profitability and the enhancement of its risk control ability. However, China Merchants Bank still has problems such as insufficient R&D mode, insufficient network channel construction, fewer fintech talents and limited risk coverage in the development of fintech. Based on the above findings, this paper puts forward the corresponding suggestions in terms of strengthening the cooperation with fintech companies, strengthening the construction of network channels, strengthening the reserve of fintech talents and perfecting the coverage of fintech.

**Keywords:** Fintech; China Merchants Bank; Business structure optimization

## 1. Introduction

Fintech refers to the high degree of integration of a series of high-end digital technologies, such as the use of blockchain, big data, cloud computing, artificial intelligence, etc., with financial business. There are roughly two impact mechanisms of FinTech development on commercial bank operations, namely, the positive technology spillover effect and the negative market crowding out effect. Technological knowledge itself has positive externalities, and the technological spillover of fintech makes commercial banks make technological progress, objectively fintech has a positive effect on commercial banks.<sup>[1]</sup> However, FinTech can indirectly hurt the commercial bank market through FinTech companies. That is, the development of FinTech brings both opportunities and challenges for commercial banks. Fintech is the future trend of the banking industry, fintech bank is a commercial bank based on the Internet and big data, and China Merchants Bank's fintech development path is of great significance for the future development of domestic commercial banks. While some domestic commercial banks are still cautious about forward-looking technologies such as regional blockchain and cloud platforms, China Merchants Bank is taking advantage of the situation and proposes the transformation goal of a "financial technology bank" to accelerate the application of digital technology innovation in financial services and other fields. China Merchants Bank's financial technology development level in the banking industry occupies a leading position, therefore, this paper takes China Merchants Bank as the research object and carries out an in-depth study on the current situation of its financial technology development and its existing problems.

## 2. China Merchants Bank Financial Technology Development Status

### 2.1. Continued increase in fintech investment

China Merchants Bank has been committed to the development of financial technology in the past

few years, and its investment in this segment of financial technology has been increasing. According to the annual report published by China Merchants Bank, China Merchants Bank's investment in fintech has gradually increased in recent years, and the proportion of fintech investment in revenue has also continued to increase. fintech investment in 2021 and 2022 will be 13.291 billion yuan and 14.168 billion yuan, respectively, accounting for 4.37 per cent and 4.51 per cent of the proportion of revenue in the same year. The increase in the amount of investment in IT by the China Merchants Bank has been around 1 billion yuan, and its total investment in this area has also exceeded 60 billion yuan. Among similar joint-stock commercial banks, China Merchants Bank is also in a distant second place in terms of its investment in fintech. According to the annual reports published by joint-stock banks in 2022, CITIC Bank's investment in the field of financial technology is 8.749 billion yuan, second only to China Merchants Bank. At the same time, the huge investment in the field of financial technology also makes the business structure of China Merchants Bank constantly optimised and upgraded, and the profitability is constantly enhanced.

## ***2.2. Fintech development to help optimise business structure***

Fintech is not only changing the relationship between traditional joint-stock commercial banks and their customers, i.e. from a single offline channel to online-offline multi-channel interactions, but is also continuously forcing traditional commercial banks to adjust their business structure and enrich the financial services they provide.<sup>[2]</sup> China Merchants Bank has integrated fintech into its retail business and promoted the digital development of its retail business. With the help of application software, China Merchants Bank has established a digital customer acquisition model and optimised its online operation system to achieve the integration of online and offline development. In strengthening and improving the construction of the service system of the retail business, it realises intelligent and personalised marketing mode and realises the optimisation and upgrading of the business structure by promoting the development of the retail business. The development of financial technology not only brings challenges to China Merchants Bank but also brings new opportunities, prompting China Merchants Bank to complete the optimisation and adjustment of its business structure and the optimisation and upgrading of financial services through the development of financial technology to promote its development.

## ***2.3. Fintech Development for Profitability Improvement***

The development of FinTech has pushed traditional commercial banks to reshape their original market information processing model, and risk control model, and enhance their operational effectiveness by optimising their business decisions.<sup>[3]</sup> Fintech companies are usually ahead of traditional joint-stock commercial banks in the field of financial technology, but technological knowledge itself has the nature of a positive externality, and traditional commercial banks can also benefit from the technological spillover of fintech companies to achieve technological progress. China Merchants Bank's development of fintech can contribute to profitability by improving business efficiency, reducing costs and improving customer satisfaction. On the one hand, it enhances the degree of business process automation, simplifying the operational processes of frontline staff and taking the lead in introducing robotic process automation to improve the efficiency of business operations. On the other hand, it has enhanced the degree of business management intelligence, digitally traced and researched customer information, and improved the accuracy of marketing. China Merchants Bank's cost-to-income ratio was controlled at around 33% from 2021 to 2022. Overall, China Merchants Bank has utilised big data, artificial intelligence and other fintech tools to improve the efficiency of business processing while reducing cost consumption, thereby improving profitability.

## ***2.4. Fintech development to improve risk control capabilities***

Traditional commercial banks, which have been enjoying a dominant position in the market, should realise a strategic transformation to adapt to the changes in the market environment caused by the development of fintech by developing their fintech level.<sup>[4]</sup> China Merchants Bank is one of the early banks in China to start laying out in the field of fintech, and it applies fintech to the field of risk control, which is manifested in the control of credit risk and non-performing loans in the lending business, and significantly improves its risk control ability. China Merchants Bank has constructed a risk big data platform, integrated internal and external data, promoted the application of risk models in its lending business, and established a credit management platform capable of effectively identifying and controlling risks, accurately assessing the credit risks of customers and better identifying potential credit risks. Between 2017 and mid-2022, China Merchants Bank's non-performing loan ratio continued to decline,

and it has remained below 1% for the past two years, and the total non-performing loans have also stabilised at below RMB60 billion. These figures show that non-performing loans are effectively controlled and that China Merchants Bank has improved its risk control through the development and use of financial technology.

### **3. Analysis of Problems and Reasons in the Development of Financial Technology in China Merchants Bank**

#### ***3.1. Problems in the development process of financial technology at China Merchants Bank***

##### ***3.1.1. The high cost of developing fintech in-house***

Currently, China Merchants Bank primarily relies on internal research and development for its financial technology means. This model of research and development requires the ability of banks to invest large amounts of capital and human resources. However, even if a lot of resources are invested in the early stage, it is still likely to encounter technical problems in the development process. Compared with fintech companies, China Merchants Bank is still in the nascent stage of its financial technology journey. Choosing an in-house research and development approach to foster financial technology growth, the bank not only incurs considerable time and cost commitments but also faces heightened technical complexities. In addition, there is uncertainty in the regulation of fintech, and once the application of technology research fails, a lot of time and money invested in the early stage will be wasted, which will bring financial risks to the enterprise.

##### ***3.1.2. Low number of users of online channels***

With the continued popularity of the Internet and the widespread use of mobile banking, the mobile-first strategy has gradually become the basis for the development of commercial banks' financial technology. 2022 China Merchants Bank's mobile banking users were only 178 million, and the Bank of China, which has the fewest mobile banking users of the four major state-owned banks, also had 250 million, so it seems that China Merchants Bank's scale of mobile banking users doesn't have much of an advantage in the industry, and it is far inferior to the four major state-owned banks. It is far inferior to the four big state-owned banks, and there is also a big gap between it and the fintech companies. In terms of user scale, China Merchants Bank still has a lot of room for future development.

##### ***3.1.3. Relative shortage of fintech-oriented personnel***

With the arrival of the new era, financial technology has become the main driving force of the supply-side reform of the financial industry. Financial technology is constantly updated, and the scientific and technological talents owned by banks also need to adapt to the development of financial technology promptly. 2022, China Merchants Bank has a total of 10,392 financial technology research and development personnel, accounting for 10% of the total number of employees of the group, which is an industry-leading figure in the country, but there is a certain gap with foreign banks. Foreign banks account for a large proportion of technology personnel, such as JP Morgan Chase in 2019, a total of 250,000 employees globally, of which 50,000 technology personnel, accounting for nearly 20% of the total number of employees, China Merchants Bank and there is still a large gap.

##### ***3.1.4. Risk coverage is more limited***

China Merchants Bank, in the actual operation process, has limited types of risks that can be prevented and controlled with the help of financial technology. For external risks such as reputational and legal risks, China Merchants Bank has only managed to use fintech to acquire them in the early stage, but it is difficult to deal with them the first time. And in the face of some internal risks, it failed to use fintech for effective control. Once the customer data is linked to the Internet, there may also be hacking attacks on the system leading to information leakage and other problems. The inadequate use of financial technology reflects the shortcomings of China Merchants Bank in that risk control coverage is more limited.

#### ***3.2. Reasons for the problems in the development process of financial technology at China Merchants Bank***

##### ***3.2.1. Deficiencies in the internal R&D model itself***

China Merchants Bank has chosen the internal R&D model to develop financial technology, which

means that enterprises mainly rely on the existing resources and talents they possess to develop new technologies and new products. In this mode, only relying on the enterprise's resource input, will produce input costs, high technology innovation speed is relatively slow and other problems. Compared with cooperation with external technology companies or the acquisition of innovative enterprises, the speed of commercial banks' internal research and development of financial technology is slower, and commercial banks need to set up their internal R&D teams to carry out technological research and development, which leads to the bank's inability to keep up with the changes in the market and technology promptly and also puts a certain amount of pressure on its financial position.

### ***3.2.2. Thin construction of online channel scenes***

China Merchants Bank's online banking and mobile banking are limited in terms of channel construction, and the channel scenarios are not comprehensive. Nowadays, with the rapid development of financial technology, new financial scenarios and life scenarios are constantly being generated, and China Merchants Bank is not comprehensive enough in this part of the construction, which makes it difficult to fully satisfy the needs and expectations of customers. The functions provided by China Merchants Bank's Internet banking and mobile banking are relatively simple, mainly including basic functions such as account information enquiry, money transfer and remittance, credit card repayment, etc., which can't satisfy the more complex financial needs of customers. In contrast, other banks' online channels offer more comprehensive functions, including more complex financial products and services such as wealth management and funds.

### ***3.2.3. Difficulty in training fintech talents***

The shortage of fintech talents is mainly because the fintech field is more specialised, requiring the mastery of a wide range of technical and business knowledge and the cultivation of fintech talents requires a long period of accumulation and training. Engaged in the field of financial technology to master advanced programming skills, data processing skills algorithm design capabilities and other skills, these skills need to be mastered through a long period of study and practice to be able to use, for beginners is more difficult. At the same time, the technology and application scenarios in the field of fintech in the banking industry are constantly changing, and the market demand is also developing rapidly. Therefore, fintech talents also need to constantly update their knowledge and skills, find out and accumulate experience in practice, and have practical experience to better cope with practical problems to adapt to market changes.

### ***3.2.4. The limited role of fintech risk control***

Although financial technology can improve risk management capabilities to a certain extent, the types of risks that can be controlled are limited, and China Merchants Bank may also have some internal risk risks due to insufficient and inappropriate use of technology, and failure to control them well in the face of external risks. On the one hand, improper application of technology can lead to internal risks such as operational risks. On the other hand, in the face of external risks such as reputation and law, China Merchants Bank only managed to use cloud computing and other technologies to obtain news about the Bank quickly, but it is difficult to decide to deal with it in the first time, and for the risk of compliance and regulation, it is necessary to require high-level meetings and discussions to decide to deal with it. The limited role of financial technology in controlling internal and external risks has led to the problem of limited risk coverage in China Merchants Bank.

## **4. Responses and recommendations**

### ***4.1. Strengthening cooperation with fintech companies***

The cooperation between commercial banks and fintech companies can make up for the lack of innovation caused by the difficulty in bearing the huge investment in fintech research and development and application and thus can promote the development of commercial banks. The cooperation between fintech companies further strengthens the technological foundation for digitalisation, strengthens the construction of cloud platforms, improves data integration capabilities, and applies digital technology to every aspect of business operations, internal management and product services. The cooperation between the two parties can achieve a win-win situation in terms of channel optimisation, service level, etc. and the fintech company can enhance its key business technology services.

#### **4.2. Enhancement of online service channels**

Emerging fintech companies are involved in some of the financial business, resulting in some of the bank's customers being diverted, and China Merchants Bank should take immediate steps to enhance its online channel development. There is a large gap between China Merchants Bank and the big four state-owned banks in terms of channel scenario development, and the number of online channel users is thus limited. China Merchants Bank should increase the expansion of customer life scenarios and explore the differences with peer financial institutions to form its competitive advantage in online channels. China Merchants Bank should build a financial technology-based channel, rationally use financial technology to improve mobile banking to improve the operating interface to enhance the smoothness of the operation, taking into account all aspects of the customer's life scenarios, to provide more online services, to attract more users to use mobile banking.

#### **4.3. Strengthening the pool of fintech-oriented talents**

The first step should be to start from the bottom of team building by recruiting digital talent and establishing an internal cultivation system for fintech talent. Secondly, it is necessary to retain talent and avoid employee turnover. Innovate the salary incentive mechanism, form a promotion system for financial technology talents, and create a career promotion system applicable to the characteristics of financial technology talents. Improve the supporting system in terms of assessment and promotion, allowances and benefits, and improve the treatment of financial technology personnel. At the same time, it is necessary to cultivate internal composite employees, enhance the understanding of departmental administrators and bottom-level employees on fintech, enhance the connection between ordinary employees and fintech talents, and deepen employees' knowledge of fintech.

#### **4.4. Further improve risk coverage**

The innovative application of financial technology and the high-quality development of commercial banks are inseparably related, and the high quality of commercial banks as a development goal determines the direction and focus of financial technology in the actual application.<sup>[5]</sup> In the process of developing financial technology, it is inevitable to face a variety of risks, so China Merchants Bank should pay great attention to the development of financial technology and expand the coverage of risk management and control. China Merchants Bank should establish an integrated risk management model internally to achieve efficient sharing of data and information across all departments of the bank to promote efficient data docking; and establish a sound management mechanism for the flexibility of the digital operating system to ensure that the system can operate stably in the face of a crisis.

### **5. Conclusion**

This paper studies the current situation of China Merchants Bank's development of financial technology, and through extensive collection and reading of literature, it provides a deeper understanding of the level of development of financial technology in China Merchants Bank. Financial technology has a huge impact on the business products and financial services of China Merchants Bank, and while promoting the construction of a digital financial service system of China Merchants Bank, it also optimises and adjusts the business structure and improves the profitability and risk control ability of China Merchants Bank. This paper also explores the problems generated by China Merchants Bank in the process of using financial technology to promote business development analyses the reasons for the emergence of problems, puts forward effective countermeasures for China Merchants Bank to solve the existing problems, and provides references for the development of financial technology in other commercial banks.

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