Research on the Business Operation and Effect of Financial Technology Empowering Agricultural Bank of China

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Abstract: Technologies such as big data, blockchain and artificial intelligence are widely used in the financial industry, giving birth to the rise of financial technology. As one of my country's four largest state-owned banks, Agricultural Bank of China has always been committed to the innovation and development of financial technology. This paper mainly studies the problems of financial technology empowering the business and effectiveness of Agricultural Bank of China and uses a comparative analysis method to analyze the business operation of Agricultural Bank of China from 2016 to 2021. The research results show that financial technology empowers the business of Agricultural Bank of China to achieve good results, including optimization of income structure, innovation of business model using financial technology, improvement of bank customer relationship management capabilities, improvement of risk management capabilities, and growth of operating performance. At the same time, the research results also show that Agricultural Bank of China still faces many challenges in the development of financial technology, such as shortage of talents, poor integration of traditional businesses and new technologies, fierce market competition and low customer acceptance, and put forward corresponding countermeasures. The research in this paper aims to expect that the experience of the development of financial technology of the Agricultural Bank of China can provide certain reference and reference significance for the development of financial technology of other commercial banks.

Keywords: Financial Technology; Agricultural Bank of China; Business Operation; Effect

1. Introduction

Since 2016, financial technology has become a focus and hot concept of attention in the financial field. With the rapid development and application of financial technology, the operating model of traditional banking business is undergoing profound changes. Against this background, Agricultural Bank of China is also actively exploring the deep integration of financial technology and business operations to improve operational efficiency, optimize customer experience, and reduce risk costs. Commercial banks can make up for shortcomings and promote innovation by building financial technology platforms on their own or carrying out strategic cooperation with other technology companies, thereby continuously expanding their scale and continuously improving asset quality. In April 2020, the interface of the Agricultural Bank of China's internal test DCEP was exposed, supporting functions such as scanning code payment, electronic cash exchange query, and wallet management, marking the digitalization of the application of financial technology in banks. However, as the application of financial technology in the financial industry continues to deepen, it also faces some challenges and risks, such as how to ensure the security of customer information and how to deal with network security risks are urgent issues that need to be solved. Therefore, combining fintech with traditional banking requires in-depth research to better utilize its advantages and avoid potential risks. As a representative commercial bank, whether the Agricultural Bank of China can use financial technology to gain its own interests is crucial to the development of financial technology at other levels of commercial banks. Therefore, the purpose of this paper is to take Agricultural Bank of China as an example to study the application and effectiveness of financial technology in its business, analyze existing problems and directions of improvement, and provide reference and inspiration for the application of financial technology in other banking businesses.

2. Literature Review

2.1 Related Research on How to Understand Financial Technology

Ba Shusong and Bai Haifeng believed that financial technology is a technical means to apply science and technology to the financial industry, serve the public, reduce industry costs, and improve industry efficiency [1]. Liu believed that fintech is a set of technologies that can have a profound impact on financial transactions and services [2]. Xu Duoqi believed that financial technology is the integration of finance and technology, which is a transformative innovation for the traditional financial industry [3]. Chen Yanling and He Qinxue explicitly proposed that financial technology is a technology driven financial innovation, and it should adhere to the principles of 'maintaining integrity while innovating, ensuring safety and controllability, being inclusive to improve people's livelihood, and promoting openness and mutual benefits,' fully leveraging the empowering role of financial technology to promote the high-quality development of China's financial industry [4].

2.2 Related Research on Financial Technology Empowering Commercial Banking Business Operations

Vives X. Believes that the development of financial technology has intensified competition in the banking industry, and banks need to accelerate financial product innovation and provide more convenient financial services [5]. Navarette G. B. Found through research on the product services, profit channels and business models of European financial technology companies that fintech companies can not only meet a large number of personalized needs of customers, but also optimize their business models compared with commercial banks. Therefore, the market share of financial services provided by commercial banks is squeezed and the industry status is threatened [6]. When studying the impact of financial technology on traditional commercial banks, Qiu Han and Huang Yiping found that financial technology has changed the source of funds on the liability side of the bank, making the risk of bank leverage operation higher [7]. Gu Haifeng believes that the booming Internet finance has brought about diversified financial products and services, attracting a large number of customers. In order to enhance core competitiveness, banks have achieved digital transformation, which is the general trend [8]. Through research, Hou Shying found that the dividends brought by small and medium-sized banks in financial technology investment may lag, and it is difficult for banks to quickly improve their profitability; on the other hand, excessive capital and manpower investment will lead to higher costs and expenses, reducing bank profit margins, which is not conducive to the stable development of banks [9]. Lu Minfeng believes that banks may act blindly and be eager for quick success in the process of competing with financial technology companies, resulting in the failure to detect potential risks in a timely manner, which may violate the safety principle of bank operations [10]. Sheng Tianxiang and Fan Conglai used bank small and micro enterprise loan data from 2011 to 2018 for empirical research, and the results showed that the use of financial technology can increase commercial banks' loan services for small and micro enterprises [11]. Jin Hongfei et al. have found that financial technology can reduce the risks in the operation of commercial banks, and has a stronger role in large banks and a relatively weaker effect on small banks [12]. Yang Wang et al. studied the impact of bank financial technology on the total factor productivity of commercial banks by constructing bank financial technology index. The research results show that financial technology has a positive impact on joint-stock banks and banks in developed eastern regions [13]. Xiong Jian et al. found through empirical research that financial technology will have a inhibitory effect on commercial operation performance in the short term, but in the long run, the technology spillover effect displayed by financial technology is more obvious [14]. Yu Fengqin and Yu Qianhui used text mining method to build the financial technology level of commercial banks and studied its impact on the profitability of commercial banks. The results show that the financial technology of large banks has a more obvious effect on their profitability, and their positive effects on small banks are not significant [15]. Liu Yaocheng and Zhan Wenqing used a sample of 246 commercial banks in China from 2010 to 2019 to establish a fixed-effects model to empirically test the impact of commercial banks' use of financial technology on banking operational efficiency. The results show that the use of financial technology by commercial banks can greatly improve the efficiency of banking operations. While the application of financial technology in commercial banks promotes financial innovation and the efficiency of savings transformation, it also brings new

operational and technological risks, posing new challenges to regulation. Therefore, regulatory authorities should further strengthen prudential supervision of financial technology and clarify the entry thresholds for financial technology products and services [16]. Xin Wua et al. argue in their study that the application and innovation of financial technology can improve the efficiency of financial services and optimize business models, but it can also affect banks' risk-taking, increase commercial banks' credit and liquidity risks, and reduce the risk of bankruptcy [17]. Han Qingbin proposed that financial products from third-party payment platforms, such as Yoseba, require the support of bank accounts to deliver reserves. Therefore, when the number of customers increases, it also promotes an increase in bank deposits [18]. Jia Dun and Han Haozhe used a deposit market competition model to analyze how the rapid development of platform-based wealth management affects the deposit scale of traditional commercial banks. In their research conclusions, they believe that the development of non-bank financial technology companies is significantly changing the deposit distribution and growth trends of commercial banks in China. As the competitiveness of commercial banks declines, the growth rate of bank deposits decreases [19]. Zhang Mengmeng and Yang Yuyan found in their study on the impact of financial technology on the growth of commercial banks that financial technology can promote the growth of commercial banks by changing their liability structure. Under the impact of financial technology, the competitive landscape of traditional banking is challenged. To prevent deposit outflows and ensure the stable growth of liability businesses, commercial banks are forced to undergo strategic transformation, actively change their business models, and develop new development strategies, thereby enhancing operational performance and promoting the growth and development of commercial banks [20].

3. Analysis of the Status of the Development of Financial Technology of the Agricultural Bank of China

Agricultural Bank of China has made certain achievements in digital transformation, including building a network system covering the whole country, and launching electronic channels such as mobile clients and online banking to provide customers with more convenient financial services. However, Agricultural Bank of China still has problems with insufficient technology research and development and talent reserves, which leads to its relatively weak application and innovation capabilities in emerging technology fields. Although the Agricultural Bank of China uses big data technology in financial technology as much as possible, it started relatively late and faced the problem of insufficient integration with traditional businesses. Agricultural Bank of China is actively cooperating with some technology companies, but competition in the financial technology field is fierce, and Agricultural Bank of China needs to compete with other financial institutions, technology companies and other competitors. Agricultural Bank of China also needs to face a large user base, some of the older customers may not be familiar with new technologies, which may lead to reduced service efficiency. Therefore, the Agricultural Bank of China is taking measures to help elderly customers adapt to and accept new technologies to meet the needs of different user groups.

Agricultural Bank of China has increased its investment in technology research and development, actively introduced and cultivated a group of professional talents in the field of financial technology, significantly enhancing the bank's strength in technological innovation, and thus promoting the rapid development of financial technology application. Agricultural Bank of China will work with emerging talents to jointly carry out research and innovation projects in the field of financial technology, aiming to accelerate the transformation and application of technological achievements. Agricultural Bank of China is committed to strengthening the deep integration of financial technology and traditional businesses. Through technological innovation and redesigning business processes, banks not only improve service efficiency, but also optimize customer experience, achieving a smooth transformation from a traditional manual business model to a technological business model. Agricultural Bank of China has also deepened its cooperative relationship with technology companies, and the two parties have jointly developed a series of innovative financial technology products and services, which has significantly enhanced the bank's innovation capabilities and market competitiveness. Through these efforts, Agricultural Bank of China has continuously launched financial technology products that meet market demand and customer expectations, ensuring its leading position in the

field of financial technology. Agricultural Bank of China employees need to improve their financial technology explanation skills to customers and improve their awareness and acceptance of related products. Use various channels and platforms to actively carry out publicity and promotion activities for financial technology products to improve product visibility and user stickiness.

4. Analysis on the Business Operations of Financial Technology Empowering China's Agricultural Bank

4.1 Financial Technology Empowers Business Operation Model Innovation

4.1.1 Developing new products with the help of low-code technology

Low-code development is a software development technology that uses methods that require less or no code writing to quickly generate applications to develop a network platform, allowing developers to create and publish applications through a graphical user interface, drag and drop and customize applications, significantly reduce the development and maintenance costs of enterprise business systems, realize rapid version iteration, meet changing business needs, standardize system development processes, improve delivery quality, and effectively complete the creation and deployment of information systems. In order to achieve flexible statistical analysis covering all business volumes, Agricultural Bank of China has released a self-service query analysis low-code platform. The platform further simplifies the data configuration process and supports system administrators to quickly import the underlying wide table data and interactive parameter configuration. The front-end of the platform is based on the VUE framework to improve the interactive experience, providing bank staff with flexible inquiry, report customization and kanban assembly services, and supporting the rapid release of cross-system reports and kanbans.The platform now supports multi-dimensional inquiry and report customization for retail banking, scenario finance and online payment services.

4.1.2 Using satellite remote sensing technology to serve farmers' loan business

The essence of satellite remote sensing is to use satellite sensors to obtain information on the surface from space. This information includes surface temperature, vegetation coverage, land use, water resource distribution, atmospheric composition, etc. Agricultural Bank of China is using satellite remote sensing technology to evaluate farmers' land, including land area, land type, land use, etc. Agricultural Bank of China also uses satellite remote sensing technology to accurately locate and analyze customers in rural areas, and based on customer positioning results, improve the layout of service outlets in rural areas and improve service coverage and service efficiency. In 2021, the Agricultural Bank of China applied satellite remote sensing technology to the Huinong e-loan scenario and completed the pilot project. It is the first state-owned bank among the four major banks to combine satellite remote sensing with the "three rural" fields.

4.1.3 Adopting integrated flow and batch technology to serve credit business

"Flow-in-one" was first proposed by Jay Kreps in 2015. It refers to seamlessly connecting the development, testing, deployment and maintenance of software to form a coherent production process. Agricultural Bank of China integrates the data processes of credit business and risk management business into a unified process system to realize information sharing and data interaction, avoid the problem of repeated data entry and information silos, and uses the integrated flow and batch system to achieve automatic data flow, automatic matching and automatic review, and improve work efficiency and accuracy. In 2021, Agricultural Bank of China made its first attempt to implement "flow and batch integration" in the relevant applications of the risk control business field. It used a single Flink SQL to realize real-time data monitoring and batch data alignment under the same logical framework, and based on the risk warning and monitoring mechanism, timely adjusts credit strategies and risk management measures to reduce credit risks and losses.

4.2 Fintech Empowers Precision Marketing

4.2.1 Building a smart network

Smart outlets refer to modern bank outlets that use advanced technological means and intelligent equipment to improve the work efficiency of bank outlets, optimize customer service experience in the bank, and also optimize bank operations and management. Smart outlets reduce their dependence on manual counters. They can automatically recommend appropriate financial products according to customer preferences by obtaining "customer portrait" data such as customer identity, transaction information and business needs, and provide a variety of intelligent

ways to handle business transactions. Agricultural Bank of China actively promotes the intelligent transformation of outlets. Through independent research and development of intelligent devices such as "super counters" and "mobile PAD", it has accelerated the transformation from manual services to intelligent and mobile services, thereby improving customer experience and business efficiency.

4.2.2 Using 5G messaging service system to achieve precise marketing

As a new generation of information and communication technology, 5G has been elevated to the core of the national strategy and has also become an important focus of major commercial banks in strengthening the application of financial technology. With the continuous advancement of 5G technology, 5G messaging has evolved into a way that allows many companies to communicate efficiently with customers. Agricultural Bank of China keeps up with the pace of the times and builds the 5G messaging platform as an enterprise-level entrance for bank mobile applications. Through in-depth application on the 5G messaging platform, the bank not only actively researched and developed financial services such as smart services, payment, online shopping, and business appointment processing, but also boldly explored non-financial services such as precision marketing. These measures not only continuously improve marketing efficiency and user satisfaction, but also strongly promote the pace of Agricultural Bank of China in business development and brand building.

4.2.3 Empowering precise marketing with the help of recommendation engine

A recommendation engine is a computer algorithm that can analyze big data. It depends on the user's historical behavior, preferences and interests, and recommends products or services that users may be interested in, such as products, music, movies, articles, etc. The recommendation engine will gradually understand the user's recent interests and preferences in the customer's purchasing habits, and then combine the items' attributes, categories and other information to calculate the items that best match the user's interests and finally recommend them to the user. Agricultural Bank of China integrates various types of data from customers in the banking system through the recommendation engine, including transaction records, deposit preferences, loan needs, financial preferences, etc., and creates customer portraits through data analysis and mining, including customer basic information, financial status, risk preferences and other data. Provide personalized product portfolios and discount programs based on customer risk preferences and financial needs. Finally, based on the data analysis results, the recommendation algorithm and model are optimized to continuously improve the accuracy and accuracy of recommendations to achieve the effect of precise marketing.

4.3 Financial Technology Empowers Business Transformation and Upgrading

4.3.1 Integrating online and offline channels

Commercial banks can integrate online and offline services. Customers can make appointments or apply for services through online channels and then complete the processing of offline physical outlets. They can also query or consult services through offline channels, and then operate online channels, which can achieve seamless docking and conversion of services and provide customers with more convenient and efficient financial services. The Shenzhen Branch of Agricultural Bank of China has launched the "Quick E-Distribution" service of "online processing + offline delivery". Customers submit application in online applications, and apply online through banking and delivery to the door, allowing customers to complete business processing without contact.

4.3.2 Promoting the transformation and upgrading of online financing to platform construction

In 2016, Agricultural Bank of China completed the transformation of core functions of the financial service platform, e-commerce platform and social life platform. With the operation of these three major platforms, the number of users has continued to increase. The unique financial technology ecosystem of Agricultural Bank of China has been initially established, and the transformation and upgrading of online financing from channel construction to platform management has begun. In recent years, Agricultural Bank of China has continuously developed bank branches with new concepts and rich experience, lowering the threshold for customer operations, guiding customers to explore various bank products that suit them, creating a smarter interactive environment, so that outlets can operate and respond anywhere.

4.3.3 Promoting cross-border cooperation between banks and financial technology companies

Agricultural Bank of China actively develops cooperation with other scientific and technological units, research institutions, etc. to jointly innovate

financial technology. Through cooperation and innovation with industry-leading technology companies, we will use external forces to improve efficiency and continuously develop new financial service methods and processes. On May 23, 2017, Agricultural Bank of China and Huawei signed a joint innovation strategic cooperation agreement with the theme of "New Generation Infrastructure Cloud Computing Platform", deepening cooperation in core technology fields such as virtualization, distributed storage, and SDN networks in computing and storage. On June 20, 2017, Agricultural Bank of China and Baidu Group signed a strategic cooperation agreement to build a "Financial Technology Joint Laboratory", which will develop cooperation and innovation based on six business scenarios: customer portrait, precise marketing, risk monitoring, customer credit assessment, intelligent customer service, and intelligent investment, and clarify the construction ideas, architectural framework and implementation strategies of the artificial intelligence application of Agricultural Bank of China.

4.4 Fintech Empowers Business Strategies and Key Businesses

4.4.1 The implementation of digital business strategy has achieved remarkable results

The remarkable achievements of the Agricultural Bank of China in implementing its digital business strategy are mainly due to the use of financial technology digital technology to achieve customer coverage, improve services, innovate products, manage risks and optimize costs. Agricultural Bank of China is actively promoting the "Top Ten Projects" of digital transformation and has achieved remarkable results in this process. As of 2021, the total amount of investment in information technology by Agricultural Bank of China reached 20.5 billion yuan, an increase of 12.2% over last year. This investment provides a strong impetus for the digital transformation of Agricultural Bank of China. At present, Agricultural Bank of China has successfully built a complete online credit product system, among which "Agricultural Bank of China e-loan" performed particularly well, with a growth rate of up to 63%, and the balance exceeded 2 trillion yuan. At the same time, online supply chain financing has also made important breakthroughs, with the financing amount exceeding 100 billion yuan. These achievements fully demonstrate the firm determination and remarkable achievements of the Agricultural Bank of China on the road to digital transformation.

4.4.2 Improving key businesses

By improving efficiency, optimizing customer experience, expanding business channels and enhancing risk management capabilities, financial technology has improved various operating performance indicators for Agricultural Bank of China, including debt-to-asset ratio, return on assets, non-performing loan ratio and customer satisfaction, thereby improving the bank's competitiveness and profitability. In 2021, Agricultural Bank of China achieved results in all key business indicators. Among them, the total number and incremental number of active customers of mobile banking firmly ranks first in the industry, demonstrating its strong customer stickiness and market competitiveness. At the same time, the total number of corporate customers has also achieved significant growth, reaching 6.82 million, an increase of 580,000 compared with the beginning of the year, further consolidating the leading position of Agricultural Bank in the corporate customer market. In terms of asset scale, the total assets of the Agricultural Bank of China reached an astonishing 29.0 trillion yuan, an increase of 6.56% compared with the end of last year, demonstrating its strong financial strength and stable business strategy. In addition, the deposit balance and loan balance also achieved growth of 8.16% and 11.48% respectively, with the deposit balance reaching 22.0 trillion yuan and the loan balance reaching 16.9 trillion yuan, which fully reflects the strong growth momentum of Agricultural Bank of China in deposit absorption and credit business.

5. Analysis of the Effectiveness of Financial Technology Empowering the Business of Agricultural Bank of China

5.1 The Effect of Financial Technology Empowering Business Model Innovation

5.1.1 Optimizing the income structure

Financial technology continues to promote reform and innovation of Agricultural Bank of China in institutional organization, access assessment, business model, etc., and provides technology companies with diversified financing channels and sources of funds, such as science and technology innovation loans, science and technology innovation bonds, and stock-to-bond linkage. In 2021, the "Agricultural Bank of China e-loan" business achieved remarkable results, with the remaining balance exceeding the 2 trillion yuan

mark, a surge of 52.7% compared with the beginning of the year. At the same time, the balance of online supply chain financing has also successfully exceeded 90 billion yuan. In addition, the intelligent rural comprehensive service platform has been successfully put into operation, injecting smart impetus into rural development. In promoting the management of rural collective "three assets" and has also achieved remarkable results. It has successfully signed contracts with 1,147 counties, an increase of 614 compared with the beginning of the year, contributing positive strength to rural revitalization.

5.1.2 Improving customer relationship management capabilities

Fintech has greatly reduced the cost of searching and information on customer data, promoted product updates and service efficiency, and improved customer satisfaction. Agricultural Bank of China uses big data technology to conduct a comprehensive and in-depth analysis of a large amount of customer data. By identifying the customer's status, it can also assist banks in making loan decisions in terms of credit business, which greatly reduces the time cost of customers in product selection and also reduces the transaction costs of commercial banks to expand their business. The customer service experience upgrade launched by Agricultural Bank of China has made the cumulative sales of 4.53 trillion yuan of products in 2021, about 4.5 times that of the previous year.

5.1.3 Enhancing risk management capabilities

Establish a customer service and feedback mechanism in the integrated flow and batch system to realize comprehensive recording and management of customer information and promptly respond to customer needs and feedback. Continuously optimize credit products and services to improve customer stickiness. By integrating flow and batch application to credit and risk control businesses, Agricultural Bank of China can achieve rapid approval of credit business and refined risk management, improve the efficiency and quality of credit business, while reducing credit risks and ensuring the safe and stable operation of banks.

5.2 The Effect of Financial Technology Empowering Precise Marketing

5.2.1 Building a customer-centric digital product application system

Based on the huge customer base, Agricultural Bank of China uses a recommendation engine to further expand its user base. With the help of the real-time and intelligence of the recommendation engine, it realizes real-time interaction and communication with customers and timely adjusts recommendation strategies and marketing plans. Agricultural Bank of China's next generation financial technology: The digital cloud platform is an intelligent IT architecture platform built based on artificial intelligence, big data and cloud computing technologies. Create a delicate and thin front desk to quickly respond to customers; create a solid middle desk with service and banking as the core, and improve product comprehensive service capabilities; pursue a single cooperative output of resources/capabilities, create a strong backend to provide banks with strong technical output capabilities. From 2018 to 2019, the R&D Center of the Agricultural Bank of China gradually completed the construction of the Huinong e-loan product system, broadened the online credit channels, and allowed customers to apply for "Huinong e-loan" related products online at home.

5.2.2 Development of inclusive financial innovation business

Agricultural Bank of China has always adhered to the concept of HP's financial development, vigorously promoted integrated branch services exchanges and surrounding people's life scenarios, strived to make financial services close to people's lives, and actively obtained people's livelihood information such as schools, hospitals, industries, taxes, etc. Interact between banks and enterprises to provide customers with one-stop service. In recent years, the Agricultural Bank of China has continuously developed digital inclusive finance, which allows more inclusive customers to enjoy the convenience brought by financial technology. By launching the "Xiaowei e-loan" credit product system, the convenience of financial services has been continuously improved, and the product scale has exceeded 700 billion, effectively supporting the development of small and micro enterprises. The average time spent by customers at outlets has been reduced from 95 minutes to 56 minutes, and business efficiency has increased by 41%.Give full play to the advantages of outlets covering all urban and rural areas to accelerate the sinking of financial services. The peer-to-people rate recommends the Zhangyin rural version that meets the habits of county-level rural customers. In just over a year, the monthly active users have exceeded 10 million.

5.2.3 Building a multi-dimensional financial

scenario

In the field of intelligent management, the operation resources of the Agricultural Bank of China outlets are integrated, and through the connection of equipment, systems, information and front-end interaction, the real-time panoramic view of point control is completed, and the passenger flow and route trajectory is fully displayed, improving the accuracy and intelligence of outlet management and service planning, marketing coordination, and risk management in areas such as regional popularity and product sales. Agricultural Bank of China "makes better scenarios". Agricultural Bank of China focuses on the three major scenarios of people's livelihood, consumer retail and industrial chain, and builds the "Agricultural Bank of China Smart+" scenario financial brand. Based on scripts, collaboration, healthy and sustainable open cooperation stage, builds a new financial ecosystem and strengthens the financial service platform. Agricultural Bank of China is committed to improving financial service capabilities in various scenarios.

5.3 The Effect of Financial Technology Empowering Business Transformation

5.3.1 Reasonably adjusting the existing asset size

At the end of the third quarter of 2023, the total assets of Agricultural Bank of China increased by 4.8 trillion yuan from the beginning of the year, reaching 38.7 trillion yuan, and the total assets reached the second among the four major state-owned banks. The stability of the indicators shows that the Agricultural Bank of China has determined the correct way to develop the real economy at a high-quality level. It is the demand for high-quality development and rural revitalization that the Agricultural Bank of China, which was originally distributed in the county, can take advantage of its widely distributed urban and rural advantages to promote its own rapid and high-quality development. At the same time, the achievements of the Agricultural Bank of China in the transformation of financial technology have also laid the foundation for the achievement of its achievements. Financial technology can help Agricultural Bank of China automate many daily processes, including approval processes, customer service, etc., thereby improving work efficiency. Banks can control various costs more carefully, including labor costs, operation costs, etc., and improve resource utilization efficiency. Financial technology can also promote the development of new payment methods such as mobile payment, improve transaction efficiency, and reduce the pressure on traditional banks at counters.

5.3.2 Enhancing the competitiveness of bank products and services

Agricultural Bank of China has established a fintech ecosystem to introduce external innovations to accelerate technology updates and business changes through cooperation with startups and technology companies. Actively participate in the Open Banking Initiative, sharing data and services with third-party partners, broadening the boundaries of fintech products and services and providing a broader solution. In 2021, Agricultural Bank of China will improve its open source management system and adopt a strategy of "bringing in" and "going out", and expanding its vision of technological innovation; in addition, Agricultural Bank of China has also established a relatively complete financial technology innovation system, and built a science and technology innovation system that adapts to future development through tracking and screening of new technologies, co-construction of total points, and platform-based output service capabilities, ensuring the deep integration and mutual empowerment of technology and business, and jointly promoting the bank's digital transformation work to a new stage.

5.3.3 Expanding customer scale

In terms of customer acquisition strategies, Agricultural Bank of China has made in-depth optimizations on the process of users registering for mobile banking by themselves. By implementing accurate experience monitoring mechanism and user feedback evaluation system, banks can collect and analyze user usage data in real time, providing strong support for decision-making. The success rate of mobile banking self-service registration has increased by 6 times on the original basis, firmly ranking at the leading level in the industry. In order to improve operational efficiency, Agricultural Bank of China is exploring the "fine operation" model of online customers. For customers, accurately classify and layer them. Carry out online marketing based on online resources to improve user stickiness. In the bank retail market, Agricultural Bank of China has shown considerable strength with its advantages of cross-urban and rural layout and mobile banking utilization rate. In 2023, the number of individual customers reached 866 million, and the monthly active customers of the Agricultural Bank of China mobile banking exceeded 200 million, reaching 210 million, achieving high-speed and

high-quality development of "double" in three years. The scale of the "Agricultural Bank e-loan" product reached 4.09 trillion yuan, an increase of 1.05 trillion yuan, with a growth rate of 34%.The number of high-frequency scenarios in the Internet reached 39,800, an increase of 27.0%.These data prove the determination and strength of the Agricultural Bank of China in the utilization of financial technology.

5.4 The Effect of Financial Technology Empowering Business Performance

5.4.1 Simplifying business processes and reducing operating costs

Financial technology can optimize the operating procedures of Agricultural Bank of China in many aspects, improve efficiency, reduce costs, and enhance risk control. The traditional business model of commercial banks is mainly offline outlets. Agricultural Bank of China has completed lightweight outlets with smart banking as the main method and manual services and guidance services as the secondary method. The transaction function was originally manually changed to manual and manual to super counters and self-service equipment. Traditional commercial banks need to conduct a large number of questionnaires to understand customer needs, which requires a lot of manpower and time costs. Agricultural Bank of China has developed mobile banking and mobile applications, providing financial product sales, transaction inquiry, financial management services and other functions to meet customers' financial needs anytime and anywhere. Combined with geographical location and behavioral analysis technology, we provide customers with personalized marketing push and service positioning, improve transaction convenience and user experience, and optimize the allocation of human, time and other resources of Agricultural Bank, reducing operating costs.

5.4.2 Rapidly realizing bank transformation and enhancing bank core competitiveness

In early 2019, Agricultural Bank of China, based on the concept of "Internet, big data, smart outlets, and open banking", deepened the digital transformation of financial technology and strived to create a better customer experience. High-quality and efficient financial technology innovation requires supporting management concepts, operating mechanisms and implementation methods. Many forces such as technology, industry, customers and cross-border competition have jointly promoted the transformation of banks from business models to smart banks. Fintech is a dynamic factor in the development of smart banks. Information technology is not just a gadget for the development of the service industry but has gradually become a key tool and development engine for guiding customer needs, innovating banking business, and expanding the customer acquisition market. Since the 1980s, from independent applications, county-level microcomputer networking, urban concentration, provincial concentration, entire database to the launch of a new generation of mainstream banking systems. Agricultural Bank of China has always closely monitored, studied and applied financial technology at all stages, constantly innovated and optimized information construction. These strategies and methods can help Agricultural Bank of China transform rapidly and improve its core competitiveness.

6. Conclusions

Fintech is a technology-driven financial innovation. It is redefining the pattern of the financial industry, bringing more convenience and opportunities to customers and the entire society, and also raising new challenges and responsibilities. Through the above five parts, this paper analyzes the effect of financial technology empowering the business of Agricultural Bank of China and understands the impact of financial technology on the business of Agricultural Bank of China, including the benefits of cost, efficiency, increase and decrease in profits, etc., to determine whether it has brought obvious economic benefits to Agricultural Bank of China. The conclusions of the research are as follows:

(1) The development of financial technology in Agricultural Bank of China will help improve its own operating performance. Agricultural Bank of China continues to leverage its advantages of wide customer coverage through the improvement of the digitalization of financial technology, continuously expands its customer base, and makes it more competitive among its peers. In terms of business, 5G information, VR/AR technology, privacy computing, satellite remote sensing and edge computing have made progress. AR technology is applied to product marketing, and customer experience has been improved. Privacy computing provides a technical basis for merging data and publishing more valuable applications; satellite remote sensing technology solves some problems related to farmer customer

credit; edge computing creates a new technology model that optimizes the quality and efficiency of operations.

(2) In terms of technological support, we will make efforts in five fields: cloud native, streaming integration, low-code development, chaos engineering and AIOps. Cloud native technology builds an information system application architecture and software R&D system; the "Fenghuo Platform" in the Agricultural Bank of China has been implemented, extending the scope of application of real-time data processing; low-code development, chaos engineering and AIOps have fully implemented the three application R&D links of development, testing, and operation and maintenance through a series of pilot projects such as new tool R&D and new platform construction, ensuring the response speed and software quality of business needs.

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