

Financial Technology under the Background of China Merchants Bank Retail Business Transformation Analysis

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Abstract: Nowadays, under the influence of the new normal of the economy and the marketization of interest rates, the traditional corporate business of commercial banks is no longer grand, and the transformation of commercial banks has become inevitable. With the deepening development of financial technology, all major commercial banks have joined the team of retail business transformation. The competition is in full swing, but China Merchants Bank has been able to break out of the tight encirclement and successfully transform. Therefore, in the context of financial science and technology, taking the retail business transformation of China Merchants Bank, the "king of retail", as an example, this paper analyzes the retail business transformation measures of China Merchants Bank from four directions: product, marketing, operation and risk control. On the basis of financial technology related theories, this paper first combs the background and specific measures of China Merchants Bank's retail business transformation, and then summarizes the successful experience of China Merchants Bank, such as financial technology optimization strategy, multi-channel construction of intelligent upgrading, innovative products and services, and the establishment of intelligent risk control system, in order to give other commercial banks some inspiration in the transformation of retail business.

1. Introduction to Relevant Theories of Financial Technology

1.1. Big Data Technology

With the development of Internet technology, the information left by individual living and housing banks can be reflected as diverse but large-scale data, which is difficult to handle with simple data means. Big data technology can process and analyze data in a large amount and efficiently by building a platform, laying a foundation for financial innovation. Big data technology is often applied to investment and financing, bank credit investigation and other fields in the financial industry. It can not only accurately market the portrait of target customer groups, but also predict the future development of enterprises or industries [1].

1.2. Artificial Intelligence Technology

Artificial intelligence technology enables machines to continuously learn, simulate and apply

human thinking by means of machine learning and data analysis to improve the degree of automation and intelligence. In the financial field, AI technology can not only intelligently invest in research and investment consulting, facilitate customer management, but also improve the practical experience of payment settlement and financial compensation. At the same time, AI technology can continuously optimize analysis technology, upgrade real-time market response strategies, and firmly grasp intelligent risk control [2].

1.3. Cloud Computing Technology

The Internet era makes communication convenient and efficient, while cloud computing technology enables computing resources to be shared and configurable, providing customers with self-service services such as data storage, analysis and computing anytime, anywhere, as required. Therefore, in the construction of infrastructure services, cloud computing technology helps to integrate, process, develop and apply data, facilitate the improvement of traditional processing processes, help improve service efficiency, and thus reduce operating costs.

1.4. Blockchain Technology

Blockchain technology is generally based on asymmetric encryption algorithm. It stores public transaction records in a distributed database and communicates through the network connected by point-to-point nodes. It is essentially open and decentralized [3]. Different from the previous technologies, the application of blockchain technology is not very extensive, but it has been used in the financial field such as digital currency, cross-border payment and clearing, securities trading, supply chain and financial audit. It is precisely because blockchain technology can ensure the integrity, permanence and immutability of all data, and ensure the safe use of information such as payment transactions.

2. Background Analysis of Retail Business Transformation of China Merchants Bank

2.1. Development History of Retail Business of China Merchants Bank

Retail financial business is the "trump card" choice for China Merchants Bank to move towards reform and development, which is very important for its overall development. China Merchants Bank actively conducts retail business transformation. Therefore, China Merchants Bank started the transformation 1.0 stage in 2004: initially established the overall development direction of China Merchants Bank's retail first, improved the existing retail product system, and the growth trend of all indicators of China Merchants Bank after the transformation was relatively ideal.

Then in 2013, affected by the macroeconomic downturn and interest rate marketization, China Merchants Bank began to transform into the 2.0 stage, focusing on "One Body, Two Wings" and building a light bank. As a result, the profit share of retail financial business continued to grow by more than 50%, laying the foundation for the 3.0 transformation in the context of financial technology.

In 2015, China Merchants Bank began to put forward the customer acquisition strategy of "mobile first", and used mobile banking and handheld life as platforms to jointly establish a digital financial circle with outlets. In recent years, China Merchants Bank has taken this opportunity to reform the traditional banking business, expand the advantages of retail customer base, and promote the intelligent and convenient development of retail business to improve financial technology. At the same time, since 2019, China Merchants Bank has laid out financial technology banks, increased investment in financial technology innovation, and the company has actively transformed

into financial technology [4].

2.2. Necessity of China Merchants Bank's Retail Business Transformation under the Background of Financial Technology

With the rapid development of financial technology, the retail market pattern has changed rapidly. Big data, cloud computing, blockchain and artificial intelligence began to penetrate into many application scenarios of financial business, which not only promoted the optimization and upgrading of financial models and services, but also effectively affected the development of financial fields such as payment and settlement, deposit and loan business and even investment and wealth management ^[5]. With the help of financial technology, commercial banks can expand their business types, enhance their service quality, realize the transformation of retail business and improve their profitability.

In recent years, the consumption structure of Chinese residents has been upgraded, and the consumer financial market is also very broad. Many financial technology enterprises rely on their own advantages to carry out retail business. Financial technology enterprises such as Ant Financial and JD Financial also use the network platform to join the blue ocean competition field in the financial industry. Traditional retail business has received a lot of impact, and the competition in the retail industry has intensified. Although it has brought challenges to the development of traditional commercial banks, China Merchants Bank has always taken retail financial business as the strategic core, focused on the development of retail business, and has always had industry-leading advantages in customer scale, product expansion, risk control, etc. The internal transformation conditions of China Merchants Bank are very mature, which is also a good opportunity for China Merchants Bank to transform its retail business.

3. Analysis of China Merchants Bank's Retail Business Transformation Measures under the Background of Financial Technology

China Merchants Bank has always adhered to the transformation strategy of taking customers as the center and retail business as the core, optimizing and upgrading retail business by continuously increasing investment in financial innovation, starting with four systems of product, marketing, operation and risk control, strengthening the digital transformation of retail finance, and strengthening the differentiation advantage of retail business competition.

3.1. Online Operation Innovation, Mobile Priority Strategy First

As one of the first commercial banks to implement retail business strategy in China, China Merchants Bank is in the forefront of innovation in its business model. The infrastructure of China Merchants Bank is based on the rapid development of financial technology, and the retail business is also moving towards data, intelligence and networking. China Merchants Bank has made a transformation oriented by user thinking, and has successively put forward business service concepts such as asset management scale and monthly active users. Its business direction has also changed from bank card operation to APP operation.

In order to achieve the "mobile priority" strategy, China Merchants Bank focuses on the development of mobile banking APP and handheld life APP, which not only covers comprehensive financial services in all aspects such as account management, consumer life, investment and wealth management, but also achieves the ingenious integration of financial payment, food, clothing, housing and other daily life scenarios, breaking through the limitations of traditional retail financial services. China Merchants Bank has continuously promoted the innovation of secondary retail

business operation mode, which has changed the way customers participate in banking business, comprehensively promoted the realization of "card free" business status, simplified customer business handling procedures, and greatly improved the operational efficiency of banks and merchants.

3.2. Product System Innovation to Meet the Needs of Users in the Whole Scene

Conforming to the development trend of financial technology and focusing on user experience, China Merchants Bank has constantly introduced new products in the process of retail business transformation, and innovatively designed financial products with different characteristics in different business categories. For example, in the retail deposit business, China Merchants Bank launched PayPal Universal to pay salaries, taxes and fees and even integrated investment and financing services, effectively improving retail deposits and customer retention. Also in the retail loan business, China Merchants Bank has developed the e-Smart Credit Connect Pocket Life APP to quickly and conveniently provide personal smart consumer credit services; As well as the "Cloud Building Network" for small, medium and micro enterprises in supply chain finance, it has greatly improved the difficulties of small, medium and micro enterprises in financing. In the most important retail intermediate business, Capricorn Smart Investment, as an intelligent financial management, strictly controls risks and optimizes investment portfolio for investors, while "All in One" payment continues to expand payment ports and facilitate online payment. These products are based on various needs of users, aiming to meet the full scene service experience of users, so as to increase the stickiness and activity of customers.

3.3. Innovate Marketing Means and Improve Customer Value Mining Ability

Through the in-depth application of financial technology, the traditional retail customer marketing model has been upgraded to the form of "outlets - apps - scenes". China Merchants Bank can intelligently and conveniently obtain customers in each business link, which has fully improved the efficiency of customer acquisition. In the daily operation process, China Merchants Bank uses the digital information management platform and the "Wind Chime System" that can intelligently monitor the customer experience to integrate big data, analyze and summarize the customer's capital situation, investment preference and financial risk, so as to explore the needs and objectives of various types of customers, real-time insight and feedback of customer trends, thus achieving accurate marketing to customers and tapping the potential value of retail business customers [6].

The constantly improved big data analysis method can not only stabilize the "old customers" of China Merchants Bank outlets, but also find "new customers" who need financial services. On the one hand, China Merchants Bank followed the trend and launched interactive financial products such as "bilibili co branded credit card" with new online brands. On the other hand, China Merchants Bank also pursues hot topics, and uses WeChat official account, Tiktok Kwai and other marketing channels to release soft ads related to financial loans or points exchange activities. These measures help China Merchants Bank expand its marketing scope, broaden its customer acquisition channels, attract young customer groups to participate in retail business, and the products and services that keep pace with the times also enhance the original customer stickiness.

3.4. Innovation of Risk Control System and Active Prediction of Transaction Risk

Due to the poor risk coverage ability of traditional consumer finance risk control models, and insufficient to match the innovative development of banking business and the updating speed of digital financial fraud means, China Merchants Bank released intelligent risk control models called

"Libra System" and "Tianxun System". The "Libra System" uses high-speed computing, advanced graph algorithm and graph analysis technology to capture multi-dimensional data such as transfer time, transfer amount and payee in real time, and judge user risk level. In this way, we can not only quickly judge the external fraud in the transaction process, timely investigate the risks such as false and forged transactions, but also investigate the fraud related accounts through subsequent investigation.

On the one hand, "Tianxun System" integrates customer resource information data, analyzes customers' wealth and credit reserves, depicts customers' ability to resist risks through rule model recognition, association analysis and other means, uses micro expression recognition and voice recognition to prevent fraud risks, and uses knowledge maps and machine learning to visualize, enrich and monitor risk points in multiple directions. On the other hand, with the help of knowledge maps, users' multi platform data information is integrated to monitor the flow of funds. At the same time, new risks are scanned and calculated to form a perfect post loan early warning mechanism. In case of overdue repayment, the new intelligent collection technology based on voice interaction and machine learning technology added by "Tianxun System" can also reduce human costs and improve collection efficiency.

4. Enlightenment of China Merchants Bank's Retail Business Transformation under the Background of Financial Technology

4.1. Financial Technology Helps Strategic Optimization

Commercial banks should fully consider the changes in industry and market caused by the external environment, as well as the changes in national policies, and analyze and summarize the development status from the aspects of business model, assets and liabilities, and business performance. Only when we know our advantages and strengths, can we formulate an accurate and appropriate differentiated transformation strategy. In addition, from the perspective of the success of China Merchants Bank and the overall trend of the industry, commercial banks need to focus on the development of financial technology and vigorously invest in the research and development of financial technology. In this way, financial technology can help strategic optimization, while retail business can give full play to financial technology, optimize commercial banking business, make up for technical weaknesses, enhance its market competitiveness, and help retail business transform well [7].

4.2. Intelligent Upgrading of Multi-Channel Construction

The rapid development of financial technology has brought about more and more fierce competition among commercial banks. Therefore, commercial banks have to find ways to broaden customer channels to seek more customers. China Merchants Bank is constantly updating its online channels, using APP to invigorate the scene, combining precision marketing with offline outlets, and using the application of financial technology to enhance customer experience. It can be seen from the example of China Merchants Bank that the retail channels of commercial banks inevitably tend to be intelligent, networked and light. Therefore, commercial banks should rely on financial technology, online cooperation with third-party platforms, intelligent operation of offline outlets, and continuous investment in innovation of retail business products. So many channels have been built to continuously upgrade their intelligence, making commercial banks transform into innovative and intelligent banks [8].

4.3. Grasp Demand and Innovate Products

China Merchants Bank adheres to the principle of "focusing on customer needs" to establish a retail product system, uses big data and cloud computing to accurately develop products for customers, and releases differentiated brand products to improve customer stickiness, so as to successfully transform the retail business. In this view, customer demand is the key point of business, and enriching innovative retail products and helping customers provide personalized services are the advantages of successful transformation, which is worth learning from by other commercial banks [9].

Commercial banks and financial technology companies can jointly develop financial products, enrich diversified financial products, provide differentiated consumption functions for different types of financial products, and build a scene ecosystem according to customer needs. Using the advantages of financial technology to help retail business can not only help banks attract diversified customers and improve customer stickiness, but also improve customer structure and enhance the quality of retail business development.

4.4. Intelligent Risk Control to Guard against New Risks

In the face of huge customer groups and miscellaneous data information, commercial banks must improve the big data infrastructure, establish an intelligent risk control platform, and automatically and intelligently identify potential risks in order to improve the necessary risk prevention ability of banks if they want to make good analysis and use of this information [10]. Not only that, but now commercial banks have switched from traditional risk management mode to digital intelligent risk control system. Once there are huge mistakes in personnel or systems, or lack of risk identification for new business products, they may lead to a large number of data information leakage, loan collection difficulties and other risks, or even more serious consequences.

Therefore, commercial banks should not only increase investment in financial technology innovation, but also pay attention to the potential risks of customers and products, monitor transactions, and do a good job in self-regulation. In addition, commercial banks need to improve their insight into the risks of new financial technology, formulate targeted risk prevention and control measures in advance according to the characteristics and advantages of such new things, and at the same time, they can not relax the training of employees' risk identification ability to ensure the healthy and steady development of banks.

5. Conclusions

The transformation of retail business of commercial banks with the help of financial technology conforms to the objective trend of the development trend of commercial banks in the financial industry. Based on the case study of the successful transformation of China Merchants Bank's retail business, this paper analyzes the favorable measures for the transformation of commercial banks from four directions: product, marketing, operation and risk control. Based on the successful experience of China Merchants Bank, this paper puts forward some ideas on the transformation of retail business of commercial banks in the context of financial technology.

With the help of financial science and technology, commercial banks should adhere to the thinking of optimizing strategies with financial science and technology, help retail business to build intelligent upgrading through multiple channels, keep abreast of customers' needs for innovative products and services, establish an intelligent risk control system to identify customers' risk monitoring transactions, and be alert to new financial science and technology risks. Of course, commercial banks have their own business characteristics, and their business priorities will be

different, but the successful experience of China Merchants Bank can also give other commercial banks some inspiration to transform their retail business, so as to achieve the perfect transformation of commercial banks.

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