

The Influence of Financial Technology on the Competition Pattern of Banking Industry

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Abstract: This article mainly discusses the long-term influence of financial technology on the competition pattern of banking industry, and analyzes its positive role in promoting the transformation and upgrading of banking industry and promoting economic and social development. And look forward to the future trend of the integration of financial technology and banking. Firstly, this article summarizes the definition, classification, development process and core technology of financial technology, and analyzes in detail the profound influence of financial technology on banking market structure, business model, risk management and supervision environment. On this basis, the paper further puts forward the coping strategies of traditional banks in the face of financial technology challenges. The strategies include increasing technology investment, seeking cooperation and symbiosis, strengthening talent construction, etc. In addition, a financial technology supervision framework is constructed to promote innovation and ensure risk control. The results show that financial technology has reshaped the competitive pattern of the banking industry, promoted the digital transformation and service upgrading of the banking industry, and promoted the deepening and broadening of the financial market. It has provided a strong impetus for economic and social development. Furthermore, the growth of financial technology also poses new challenges to risk management and supervision, requiring banks and regulatory agencies to constantly innovate and improve.

1. Introduction

In the digital wave of the 21st century, financial technology, as a force to be reckoned with, is reshaping the global financial industry at an unprecedented speed [1]. With the continuous maturity and integration of advanced technologies such as Internet, big data, artificial intelligence and blockchain, financial technology has not only opened up new channels for the provision of financial services, but also subverted the operation mode and service concept of traditional banking in a deeper level [2-3]. From mobile payment and online lending to smart investment and digital currency, the wide application of financial technology has greatly improved the efficiency, convenience and inclusiveness of financial services [4]. Furthermore, it also poses a severe challenge to the market position, customer relationship and risk management of traditional banks. Therefore, in-depth study of the impact of financial technology on the competitive pattern of the banking industry is of guiding significance for the transformation and upgrading of the banking industry itself [5]. It is also the key to understand the future financial ecological evolution, formulate effective regulatory policies and promote high-quality economic development.

Looking back on previous studies, the impact of financial technology on the banking industry has become the focus of academic and industry attention. The existing literature has conducted in-depth discussions from the dimensions of technological innovation, market structure change, service innovation, risk management and regulatory challenges [6]. This provides a rich theoretical basis and empirical basis for this study. With the continuous evolution of financial technology, new application scenarios, technical challenges and regulatory issues emerge one after another, which requires a more comprehensive and in-depth analysis. The purpose of this study is to deeply analyze how financial technology affects the market structure, service innovation, risk management and regulatory environment of the banking industry through technological innovation, and then explore

its far-reaching impact on the banking competition pattern. Through the research, this article hopes to provide strategic reference for the transformation and growth of the banking industry and provide theoretical basis for the regulatory agencies to formulate a policy framework that adapts to the growth of financial technology. Furthermore, it also provides knowledge support for consumers to understand and enjoy the convenience brought by financial technology.

2. Overview of financial science and technology development

2.1. Definition and classification of financial technology

Financial technology refers to a series of technologies and practices that apply modern technology to the field of financial services and provide financial products or services in an innovative way, so as to improve customer experience, enhance operational efficiency, reduce transaction costs and expand the boundaries of financial services [7]. The growth of financial technology can be traced back to the end of last century. With the popularization of Internet technology, early services such as online banking and online payment began to appear, marking the germination of the era of financial technology. In the 21st century, with the rapid growth of mobile Internet, big data, cloud computing, artificial intelligence and other technologies, financial technology has ushered in explosive growth [8]. From the initial payment facilitation, to the later product and service innovation, and to the rise of risk management and supervision technology, financial technology has penetrated into every corner of the financial industry. It is a simple combination of technology and finance, and it is also a new format and new model after the deep integration of the two [9]. According to different technical applications, financial technology can be divided into several categories as shown in Figure 1:

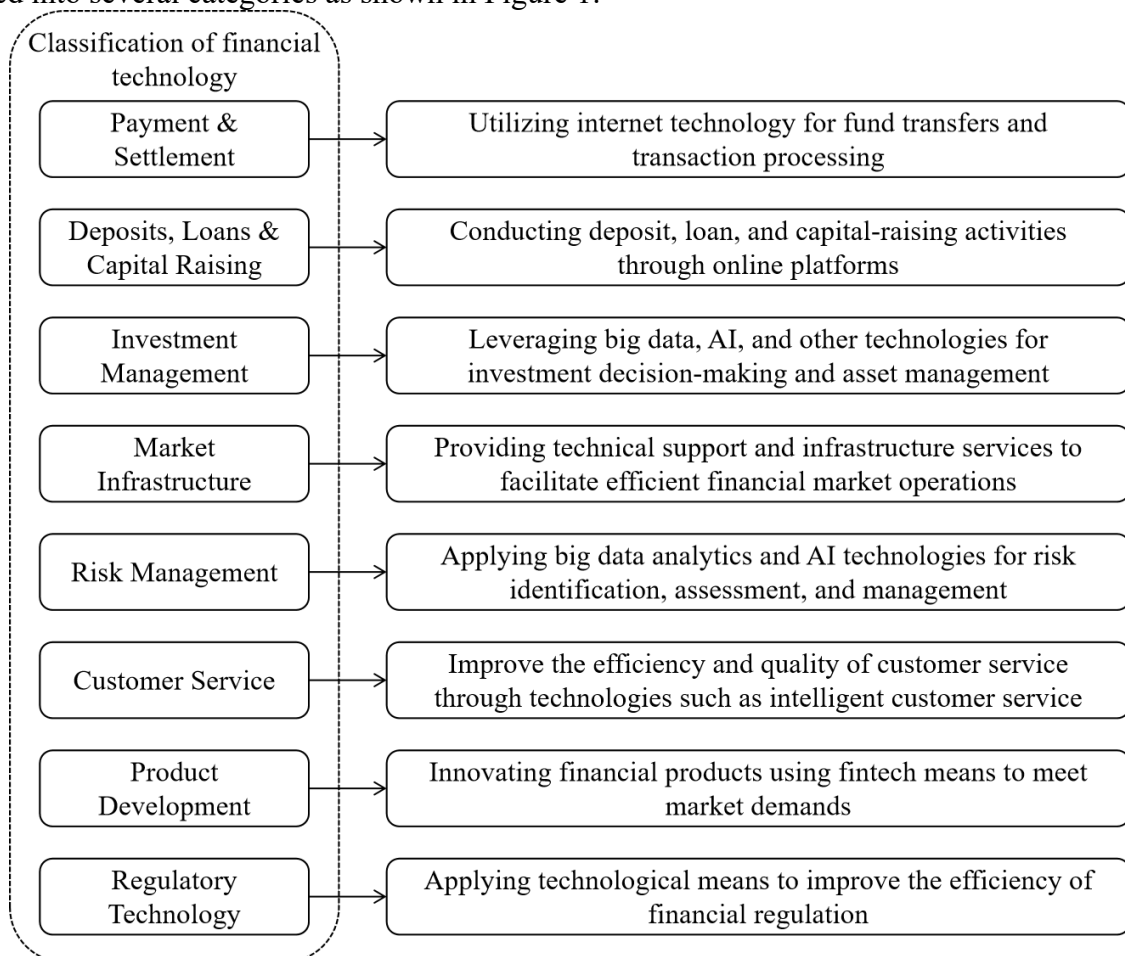


Figure 1 Classification of financial technology

The classification in the figure reflects the extensive application of financial technology in all

aspects of financial services and reveals its comprehensive and profound changes to the traditional financial system.

At present, the global financial technology industry presents the following remarkable characteristics: (1) Innovation is active, and new technologies and models emerge one after another. (2) Cross-border integration, the boundaries between science and technology, finance and industry are increasingly blurred. (3) The trend of internationalization is obvious, and transnational cooperation and competition coexist. (4) The regulatory environment is becoming more and more perfect, and governments and regulatory agencies in various countries have issued policies to encourage innovation and strengthen supervision, and strive to promote the healthy growth of financial technology while ensuring financial security.

2.2. Core technologies and innovative applications of financial technology

The core technology of financial technology is the key to promote its rapid development. The application of big data technology enables financial institutions to analyze customer behavior more accurately, evaluate credit risk and realize personalized service and risk management [10]. The application of artificial intelligence and machine learning makes intelligent customer service and intelligent investment possible. This greatly improves the service efficiency and customer experience. Blockchain technology has the characteristics of decentralization and non-tampering. It provides a safer and more transparent solution for financial transactions, especially in the fields of supply chain finance and cross-border payment. The flexible expansion of cloud computing provides efficient and low-cost infrastructure support for financial institutions and accelerates the digital transformation of financial services.

3. Analysis of the influence of financial technology on the competition pattern of banking industry

3.1. Changes in market structure and competitive situation

The rise of financial technology, like a strong wind, has wrinkled the calm lake of traditional banking and triggered profound changes in market structure and competitive situation. With its flexible organizational structure, rapid innovation ability and keen insight into users' needs, financial technology companies have rapidly emerged as a cutting-edge force in the banking industry. They attract a large number of young users and small and medium-sized enterprises by providing convenient services such as online payment, peer-to-peer lending and intelligent financial management, breaking the market monopoly of traditional banks and promoting diversified competition in the financial market. Under the impact of the wave of financial technology, traditional banks have to accelerate the pace of transformation and actively lay out the field of financial technology by setting up subsidiaries, cooperative alliances or internal incubation. This "old and new blend" market structure has intensified the competition in the banking industry. It has also promoted the service upgrade and efficiency improvement of the entire financial industry.

3.2. Business model and service innovation

Financial technology has changed the market structure of the banking industry, and further promoted the innovation of business models and the upgrading of services. The physical outlets and manual services that traditional banks rely on are gradually being replaced by online platforms, self-service and intelligent systems. Financial technology companies have achieved accurate portraits and personalized services for customer needs through technologies such as big data analysis and artificial intelligence. Blockchain technology is applied to supply chain finance, which improves financing efficiency and transparency. Financial technology has also promoted the generalization of financial services. It enables remote areas and low-income groups to enjoy convenient and low-cost financial services. The innovation of this business model and the change of service mode have improved the user experience, and the service boundary and profit space of the banking industry have been further broadened.

3.3. Risk management and regulatory challenges

While financial technology brings convenience and innovation, it also brings unprecedented challenges to the risk management and supervision of the banking industry, as shown in Table 1. Therefore, it is an urgent task for banks and regulators to strengthen risk management and regulatory innovation and build a risk prevention and control system that adapts to the growth of financial technology.

Table 1 The Challenge of Financial Technology to Banking Risk Management and Supervision

Challenge Aspect	Specific Content
Data Security & Privacy	Increased risk of data breaches and privacy violations
Cybersecurity	Vulnerable to hacking attacks and cyber fraud
Credit Risk Assessment	Complexity in assessment due to new products and services
Operational & Compliance Risk	Increased risk of operational errors and compliance issues due to rapid innovation
Market & Liquidity Risk	Market fluctuations impacting asset prices and liquidity
Cross-Industry & Cross-Border Risk Transmission	Rapid transmission of risk across different industries and regions
Regulatory Arbitrage & Gaps	Innovation bypassing existing regulations or creating new regulatory gaps
Technology & Dependency Risk	Significant impact on business due to technical failures or system outages

4. Coping strategies

4.1. Coping strategies of traditional banks

Facing the surging tide of financial technology, if traditional banks want to be invincible in the fierce market competition, this article thinks that they must take the initiative to seek change and adopt positive transformation and upgrading strategies. The details are as follows:

(1) Increasing technical input is the key. Banks should increase investment in information technology, introduce advanced technologies such as big data, artificial intelligence and blockchain, improve the automation and intelligence of business processing, and build a digital and intelligent financial service system. Furthermore, banks should strengthen cooperation with financial technology companies. By co-building platforms and sharing data, banks can achieve deep integration of technology and business, and jointly develop innovative products and services.

(2) Cooperative symbiosis is an important path. Traditional banks should abandon the "zero-sum game" thinking, actively seek cooperation with financial technology companies, internet companies, technology companies and other parties, and use their respective superior resources to build an open and win-win financial ecosystem.

(3) Talent construction is the fundamental guarantee. Banks should attach importance to the cultivation and introduction of financial science and technology talents, establish a perfect talent incentive mechanism, encourage employees to learn new technologies and knowledge, and enhance the team's scientific and technological literacy and innovation ability.

4.2. Construction of financial technology regulatory framework

Under the background of the rapid growth of financial technology, it is the key to ensure financial stability and promote the healthy growth of financial technology to build a regulatory framework that not only promotes innovation but also ensures controllable risks. The supervision system should be forward-looking and flexible, able to track the latest growth of financial technology in time, predict and evaluate emerging formats and potential risks, and avoid risk accumulation caused by lagging supervision. Relevant departments should implement classified supervision and formulate differentiated supervision policies and measures according to different business types, risk characteristics and development stages of financial technology, which not only encourages innovation, but also effectively prevents and controls risks. Furthermore, strengthen

cross-departmental and cross-regional supervision and coordination, establish information sharing and joint supervision mechanisms, form a joint supervision force, and improve supervision efficiency.

The regulatory framework should focus on protecting consumers' rights and interests, establish and improve the information disclosure and risk warning system of financial technology products, and enhance market transparency. In order to ensure that consumers can fully understand the characteristics and risks of products and make rational choices. We should also encourage industry self-discipline, give play to the auxiliary role of industry associations and professional institutions in the supervision of financial technology, and jointly create a healthy and orderly environment for the growth of financial technology.

5. Conclusions

Financial technology, like a strong wind, has profoundly changed the competitive pattern of the banking industry and injected new vitality into economic and social development. In the long run, financial technology has broken the service boundary of traditional banks, promoted the generalization and personalization of financial services, and made financial services more convenient, efficient and safe. It promotes the digital transformation of the banking industry, urges banks to shift from product-oriented to customer-centered, and from single service to integrated financial services, thus improving the service quality and competitiveness of the entire banking industry. Furthermore, the growth of financial technology has also promoted the deepening and broadening of the financial market, provided more diversified and convenient financing channels for the real economy, reduced financing costs and improved the allocation efficiency of financial resources. This has played a positive role in promoting economic growth and industrial upgrading. Financial technology also enhances the stability of the financial system by improving the transparency and traceability of financial services, which provides a strong support for preventing financial risks and maintaining financial security.

The integration of financial technology and banking will show a closer and deeper trend in the future. With the deepening of globalization and the cross-border characteristics of financial technology, international financial technology cooperation and exchanges will be more frequent, cross-border financial services will be more convenient, and the internationalization trend of financial technology will be more obvious. Under this trend, banks need to constantly improve their international competitiveness, actively participate in international financial technology cooperation, and meet the future challenges and opportunities of financial technology with a more open and inclusive attitude.

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