

# Research on Financial Technology for High-Quality Economic Development

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**Abstract.** The convergence of information technology and the financial industry has led to the rapid development of financial technology. The main content of this paper is to introduce the importance of the background of financial technology to the economy, and to elaborate the significance of this research. Therefore, we put forward two main problems. The first problem is the problems faced by financial technology in the current development, among which there are three results. The results of our research are the imperfect application of science and technology in financial institutions, the homogenization of financial service functions, and the lack of application-oriented professionals, which are mainly problems faced in the current development. We first discussed what is financial economy, and then discussed the main issues. Around this issue, we gave three conclusions: 1) Promote the deep integration of finance and technology; 2) improve and build the regulatory system of financial technology; 3) deeply integrate the development of financial technology and give play to differentiated competitive advantages.

**Keywords:** Financial technology, high-quality economic development, financial economy.

## 1. Introduction

The background of FinTech is the convergence of information technology and the financial industry. It stems from the financial industry's need to change the traditional business model, as well as the rapid development and popularization of information technology. The development of fintech has the following main background factors. First of all, technological progress is the foundation of fintech development. With the rapid development of computer and Internet technology, the capacity of data processing, storage and transmission has been continuously improved, which provides a foundation for the innovation of financial business. Secondly, the popularity of mobile Internet has also promoted the development of fintech. The wide application of smart phones makes financial services such as mobile payment and mobile banking more convenient, and also promotes the development of fintech in mobile terminal. The rise of big data and artificial intelligence has provided financial institutions with more accurate risk assessment, customer portrait and personalized recommendation capabilities, promoting the further development of fintech. Financial regulatory reform is also an important driving factor for the development of fintech. Many countries have reformed the financial system, promoted the opening and competition of the financial market, and stimulated the innovation vitality of fintech. Finally, changes in user needs have also driven the development of fintech. The expectations of the new generation of consumers for financial services have changed, with their more convenient, personalized and intelligent financial experience, which promotes the continuous iteration and innovation of fintech. The global fintech development scale is in a period of continuous expansion. The financial industry itself has a huge market scale, and the supply of traditional financial services can no longer meet the growth of the demand for digital and intelligent finance, so financial institutions have increased their investment in science and technology. At the same time, the development potential of fintech is also recognized by investors, making fintech investment and financing favored in the capital market.

From my perspectives, there are four specific role paths of science and technology finance on the quality of economic growth.

(1) Improving the structure of economic growth Technology innovation activities with long time, large investment, high risk properties, inevitably make the enterprise own capital scale cannot fully cover the whole life cycle: but technology innovation activities also have high economic benefits and social benefits coexist properties, make science and technology enterprises from public science and technology finance and technology of finance, to use their own upgrade and change. By meeting the needs of small and medium-sized enterprises and other high-tech industries, the technology finance system effectively reduces the asymmetry of market information and promotes the continuous prosperity and development. The thriving scientific and technological innovation industries represented by high-tech industries, Not only can it form a new industrial value chain, Become a new economic growth point directly increase its proportion in the total economic aggregate; Moreover, under the characteristics of "high innovation", "high intelligence" and "high permeability", Contribute to play the role of knowledge and technology spillover effects, In the transformation of traditional industries and driving the high technology of the upstream and downstream of the industrial chain, And then to promote the upgrading of the upstream and downstream industrial structure, Promoting the optimization of the industrial structure, Then make the whole economic growth structure to the direction of advanced and rationalization of the realization of optimization and upgrading [1].

(2) Making economic growth more stable on the one hand, the support of science and technology finance can effectively improve the conversion rate of regional scientific and technological innovation achievements and realize the stable growth of regional economy through the application of scientific and technological innovation achievements at both ends of supply and demand. On the supply side, The application of a new round of technological achievements represented by cloud computing and big data, Help the existing production carriers to enhance the market-perceived intelligence and the flexibility of the production capacity, So that the organizational structure and operation process of the enterprise are optimized, Continue to provide high quality and high quantity of final consumer goods to the social market, Help to avoid market shortages and inefficiency, To a certain extent, reduce the probability of large market fluctuations; On the demand side, Technologies such as data analysis show the heterogeneous needs of consumers most vividly, Its successive preferences will be used to tap into unknown customer groups and blue ocean markets, The supply market that holds this information constantly meets the value demands of consumers, Enhance its utility level and further expand the potential growth space of the market and therefore, The application of scientific and technological innovation achievements to both sides of the real supply and demand, To smooth out the development cycle of the market economy, To keep the fluctuation range of both supply and demand of the economy within an appropriate range, It plays an important role in improving the stability and sustainability of economic growth [2]. . On the other hand, only by providing diversified financial services and launching personalized and customized financial products and financial instruments can financial institutions meet the multi-directional needs of the whole scientific and technological innovation activities themselves and seize the initiative. Therefore, the financial development of science and technology well fit the development of financial institutions business diversification needs, increased the long tail customer appeal to further enhance the financial system of capital allocation and management efficiency, return to serve the real economy of beginner's mind, reduce the negative impact of financial excessive liberalization, help to achieve stable economic growth [3].

(3) Improving the social welfare level and optimize the distribution of results increases economic output and improves the quality of national life is the fundamental purpose of improving the quality of economic growth. Financial investment in science and technology change can improve product selection type, increase the final economic output: first, consumption and service diversification enrich the consumer choice behavior, help to promote consumption behavior, consumption behavior can make consumers by obtaining goods to satisfy their desires, and can let producers by consumer consumption behavior, thus enhance the welfare level of consumers and producers: second, the economic output of the "cake" eventually increase will improve the initial distribution of personal disposable income, augmented reality feeling to improve the whole social well-being. In addition, the

financial direction of science and technology by improving the allocation of financial elements, guide the financial resources to virtual to the real science and technology, more capital is used in the real economy development, market speculation gradually suppressed, while increasing the employment opportunities narrowed the financial bubble, the equality of secondary distribution is further improved, thus the whole society and welfare distribution progress optimization [4].

(4) Improve the efficiency of resource utilization and reduce the cost of ecological environment After the investment scale of science and technology financial resources reaches a certain threshold, To boost the confidence of scientific and technological innovation subjects, Infiltrate into all aspects of society and then improve total factor productivity by optimizing resource allocation, There are three specific points: First, scientific and technological innovation means that the original combination of production factors is broken or improved, In order to cope with this change, the social division of labor must be deepened or expanded again; Second, the innovative technologies with commercial value must be able to be applied in the real economic environment, Technology enables economic factors to match each other more accurately, The multiplier effect will amplify the advantage of reducing transaction costs, Thus greatly improving the total factor productivity; Third, technological upgrading will inevitably lead to the survival of the fittest, First, they pose a threat to a large number of inefficient and zombie companies, It will then release the energy elements that were previously occupied or consumed by these backward or low-capacity enterprises, And the release of these massive economic resources, Driven by interests, advanced enterprises through the circulation and other channels, Resources are used reasonably and effectively to create more economic benefits, Finally, to promote the quality of national economic growth. In the quality of economic growth, the cost of economic growth mainly means the adverse impact of production activities on the ecological environment. And different factors of production combination form is the key factor determines the cost, science and technology financial investment to provide support to target enterprises, encourage technological innovation to reduce economic operation costs, ineffective investment and pollution discharge reduces the ecological environment, to pay attention to the development of green economy, low carbon economy and circular economy, realize economic growth from "quantity" to "quality" leap [5].

The research implications of this paper theoretical significance From the theoretical level, can greatly enrich the financial system theory of science and technology and the quality of economic growth related research results in the old and new kinetic energy conversion under the macro guidance, financial science and technology system and the double evolution of the financial system gives new connotation, and the financial theory of science and technology research always lags behind the emergence of new changes. This paper hopes that through the theoretical and empirical research of science and technology finance, it can further update the relevant concepts of science and technology finance and promote the construction of science and technology finance service system more in line with the needs of the current economic and social development. In addition, the continuous development of technology and finance also represents the formation of a win-win ecosystem of technology and finance. The new financial supply system formed by this is more aimed at the capital needs of technology enterprises both in concept and action, making technological innovation continue to brew and grow, so as to play its decisive role in promoting economic growth and social development [6]. Therefore, the development of science and technology finance, theoretically speaking, can promote the social total factor productivity to maintain or be close to the optimal state, and then improve the well-being of the whole society, and achieve the goal of high-quality development of economic growth. Realistic meaning from a practical perspective, it has become a mainstream development paradigm to lead and support the sustainable development of scientific and technological innovation and continuously promote the sustainable and high-quality development of economy. At present, in the face of the impact of the epidemic and the complex international and domestic environment, in order to reduce the pain caused by the economic downturn and fully enhance the confidence in the development of small and medium-sized enterprises, it is more necessary to grasp the development trend of increasing integration of science and finance and follow

the trend, and constantly promote the benign interaction and deep integration of the two advantages of science and technology and finance. Only in this way can the financial system develop in a benign way, so as to quickly identify and subsidize the innovative enterprises in need of funds, optimize the allocation of market resources, and then stimulate scientific and technological innovation, and expand the scope of influence of scientific and technological innovation. Full combination and effective integration of scientific and technological innovation and financial innovation is bound to improve the quality of sustainable economic development, accelerate the pace of high-quality development of China's economy, so as to better meet the risks and challenges brought by the digital economy era. Therefore, it is of urgent practical significance to study the influence relationship between science and technology finance and the quality of economic growth and make it a prominent development highlight under the new normal economy.

## **2. Issues facing fintech in its current development**

### **2.1. Imperfect Application of Science and Technology by Financial Institutions**

Under the background of the current integrated development of finance and technology, various financial institutions have invested enough resources to catch up with the development rhythm of the market economy and strengthen the integration of finance and technology. However, the resource investment of some financial institutions lacks scientific and standardized planning limits, and there will be a mismatch between input and output. For example, some institutions will set up financial technology departments to strengthen the software development and data center construction of financial institutions; On the other hand, the Internet loan department has established online websites and mobile phone clients to establish communication with users, but the software developed has relatively poor feedback test effect in concrete practice. When financial institutions combine science and technology with financial business services, they will report problems such as low work efficiency, failure to achieve expected set goals, weak website functionality, and short operation cycle [7].

### **2.2. Homogenization of Financial Service Functions**

With the development of financial technology, the financial service system has been continuously improved with the help of science and technology. However, at the same time, the development strategy and business model of financial services have become more similar, and the personalized development of financial services is lacking. Before the integration and development of financial technology, the business development of some small loan companies was relatively standardized, but with the introduction of Internet information technology into the market, it has caused a strong impact on the traditional financial business model and greatly squeezed the financial profit margin. Taking the development of credit card services as an example, in order to attract more customers, in the process of issuing credit cards, banks have launched theme cards, co-branded cards, special-shaped cards, etc., to attract customers' interest, but financial technology is the medium form of virtual cards instead of the original tangible cards, which will lose the enthusiasm of customers to apply for cards for potential customers with physical favor and collecting tendencies.

### **2.3. The Lack of Application-Oriented Professionals**

The integration and development of financial technology has put forward higher technical capability requirements for staff in the new era, but some senior managers engaged in financial institutions show relatively insufficient ability in the face of the new development situation of financial technology. It is difficult for managers' management mode and ideas to follow the pace of market development. China's financial technology development time cycle is relatively short, some financial institutions in the innovation and development of the lack of preparatory work, so that financial institutions in the face of a variety of different new technologies, there will be insufficient application, strategic development is not perfect, and talent is also a serious shortage. The excessive

mining and use of customer information by financial institutions will bring negative effects to financial institutions, cause certain social problems and affect the image of financial institutions, and the science and technology used is far beyond the carrying capacity of the business, resulting in more problems.

### **3. Financial Technology and High-Quality Economic Development**

#### **3.1. Ease Financing Constraints**

The development of financial technology has optimized the allocation of monetary resources and eased the financing constraints of economic development. On the one hand, fintech uses digital technology to break the time-space restriction between the demander and the supplier of financial resources; On the other hand, there are a large number of "large, small and scattered" financial resources in the financial market, which are excluded by traditional financial institutions due to high absorption cost and complicated procedures. However, fintech can absorb these idle financial resources in a low-cost, fast and convenient way and convert them into financial supply in the market, which not only increases the financial supply of the entire financial market. It has also enriched the types of financial products, improved the allocation efficiency of monetary funds, and promoted high-quality economic development.

#### **3.2. Mutual Promotion with New Technology**

Financial technology is the product of the deep combination of financial services and Internet technology, which can promote the development of the financial field while also promoting the development of technological innovation [8]. New concepts such as big data and blockchain have entered the market, making the computer field get unprecedented attention, Internet technological progress promotes financial innovation and development, financial development feeds technological innovation in the computer field, attracts more funds and talents, and technological innovation benefits spill over to other industries to promote high-quality economic development.

#### **3.3. Promote High-Quality Economic Development from the Consumption Side**

Fintech promotes high-quality economic development from the consumer side. On the one hand, digital payment improves the convenience of residents' consumption. New payment methods have lower cost and faster speed, and consumers' payment environment is relatively relaxed. Technology breaks the barriers of time and space, enables them to complete payment anytime and anywhere, reduces the time and capital cost of consumers' payment, improves consumers' consumption utility, and further promotes residents' consumption. On the other hand, under the background of the popularization of financial technology in many financial fields such as fund management, lending, payment and insurance, the domestic general public's financial consumption scenario is more diversified, there are more types of consumption to choose from, and the consumer demand of the masses is correspondingly increased.

#### **3.4. Reduce Cross-Border Trade Costs**

The development of fintech reduces the cost of cross-border trade and promotes the development of import and export trade [9]. The development of financial technology makes the cost of cross-border currency payment more adjustable space, enterprises can comprehensively use financial instruments and Internet technology to achieve a more accurate grasp of the interest rate market, exchange rate market and other financial fields, so as to reduce transaction costs. Meanwhile, online transactions can reduce the number of offshore entities set up, and further save costs [10].

## 4. Conclusion

This article elaborates on the path of promoting economic development through financial technology through literature analysis and theoretical research, and proposes the problems faced in the current process of financial technology development. To solve these problems, the development of financial technology should be further adjusted and improved to better adapt to the background of economic development and serve rapid and high-quality economic growth. This article proposes the following measures:

### 4.1. Promoting the Deep Integration of Finance and Technology

In order to further realize the orderly development of financial technology, it is necessary to continuously establish and improve the financial service data supervision system and strengthen the management of financial data. First of all, it is necessary to establish and improve the legal construction of financial data standards, make legal provisions on various data use standards and data flow requirements, ensure the stable development of the financial industry market, and realize information sharing on the basis of ensuring data security. The regulatory work of financial services needs to strengthen the supervision of on-chain and off-chain data of blockchain, and effectively avoid arbitrage behaviors or shortcomings in the regulatory process by strengthening the governance evaluation of off-chain data. The development of big data speeds up the flow of information, but at the same time it also brings security risks of information leakage. Therefore, it is necessary to pay attention to information protection. When providing financial services to customers, financial institutions need to provide data sharing and privacy notices to customers and inform customers of information-related use functions. There should also be strict regulations for financial institutions.

### 4.2. Improving and Building the Financial Technology Regulatory System

The realization of financial supervision needs to strengthen the top-level construction of the standardization of regulatory technology. The future development of regulatory institutions of financial services will mainly focus on the application of technology. Through the digital transformation of regulatory rules, the regulatory protection of data platforms will be realized. At the same time, financial regulatory services complete the collection of regulatory data in real time with the help of online platforms, and complete the collection, processing, classification and other basic work of information data with the help of information systems, which greatly improves the efficiency of regulatory work and reduces the cost of human resources. In the application of science and technology, regulatory technology can be combined with other financial technology to speed up the efficiency of regulatory work, and with the help of advanced technology and technology such as the blockchain Internet of things, improve the quality of financial supervision work. At the same time, it is also necessary to strengthen their awareness of risk prevention and control and carry out systematic testing and optimization services for scientific and technological systems. In order to improve the accuracy of regulatory work, necessary manual review of regulatory data obtained from regulatory technology can be carried out to ensure the transparency and effectiveness of information and data, and a sound risk prevention and control system can be established in combination with the regulatory work of various departments.

### 4.3. Deeply Integrate the Development of Financial Technology to Give Play to Differentiated Competitive Advantages

The development of the era of big data has played a positive role in the reform of all walks of life. In the process of the integration and development of finance and technology, financial enterprises can use big data to conduct comprehensive information and data analysis on customers, recommend financial products with different risks and benefits for different customers, and provide customers with differentiated customized services with big data. According to the different risk degree of different financial customers, the provision of appropriate financial services and the formulation of

different information prices can effectively enhance the differentiation competitiveness of financial enterprises. Provide investors with more professional financial services and improve the competitive advantage of intelligent and differentiated development of financial enterprises with the help of big data. The innovation and development of financial technology also puts forward higher professional and technical requirements for financial practitioners. Financial practitioners themselves have a relatively high-quality financial knowledge system, so they need to be trained in new scientific and technological knowledge, which can speed up the efficiency of talent training and enable financial enterprises to have professional and composite talents with financial technology in a short time. Saving the cost of personnel training also helps to improve the quality of financial practitioners.

## Authors Contribution

All the authors contributed equally, and their names were listed in alphabetical order.

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