

# Challenges and Countermeasures for Financial Regulation in the Context of Financial Technology

Ren Wang

Business College of Guizhou University of Finance and Economics, Guizhou 558099, China.

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**Abstract:** Fintech has been a hot topic in recent years. In China, fintech has risen to the national strategic height, and its status and importance have become prominent. The deep integration of science and technology and finance has brought significant improvement to our daily life style, not only in terms of strategic position but also in terms of our daily clothing, food, housing and transportation. However, with the rapid development of fintech, there are also a series of chaos such as breaking away from regulation and breaking through risk bottom line. This paper analyzes the challenges facing financial regulation under the background of fintech, and puts forward countermeasures against the challenges.

**Keywords:** Financial Technology; Financial Regulation; Countermeasure.

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## 1. Introduction

At present, the development of fintech is profoundly changing the financial ecology and reshaping the financial landscape. At the same time, fintech risks are increasingly emerging and taking on new characteristics. The development of fintech also faces challenges from information asymmetry, regulatory concepts and outdated regulatory systems. Secondly, it analyzes the regulatory challenges faced by fintech, and puts forward appropriate regulatory measures such as optimizing regulatory tools and enhancing regulatory technical ability, perfecting information disclosure mechanism, innovating regulatory mechanism, and improving the construction of regulatory legal system.

## 2. Overview of FinTech

### (1) Definition of FinTech

Financial technology has emerged in countries with more developed financial markets, such as the United States and the United Kingdom. From its English translation, fintech can be simply understood as the combination of finance and technology, which refers to the use of various technological means to innovate the products and services provided by the traditional financial industry, improve efficiency, and effectively reduce operating costs. According to the definition of the Financial Stability Board (FSB), fintech mainly refers to emerging business forms, new technology applications, and new product services driven by emerging technologies such as big data, blockchain, cloud computing, and artificial intelligence, which have a significant impact on the financial market and financial service business supply. View of Comprehensive Data Access

This article believes that the concept of fintech can be discussed from two aspects: on the one hand, fintech has emerged in product innovation and traditional financial services, ultimately still being finance. On the other hand, financial technology is a technological means derived from the development of modern technology that specifically serves the financial industry. Financial technology has a very powerful technological gene that can empower the financial industry to improve quality and efficiency.

### (2) Development History of Financial Technology

Financial technology has gone through three stages of development. The first stage was financial informatization (1980-1999), with the initial integration of financial services and electronic information technology. Various financial institutions have established IT departments, and some financial informatization products have emerged, such as bank cards and ATM machines, which are specific manifestations; The second stage is Internet finance (2000-2010). Financial institutions carry out services around the Internet, and financial services gradually move from offline to online. This process may be slightly later in China, reaching its peak roughly from 2013 to 2015. Specifically, the transformation of some traditional Internet, such as mobile banking and mobile payment, is the optimization of traditional financial formats, but there are also some new financial formats, such as P2P, crowd-funding; The third stage is the deeper integration of finance and technology (from 2011 to present). Most financial activities rely on emerging cutting-edge technologies such as cloud computing and artificial intelligence to improve the quality and efficiency of financial development, and stimulate new financial behaviors, such as big data credit reporting and intelligent investment advisory.

## 3. Challenges to financial regulation in the context of Fintech

### (1) Asymmetry of regulatory information

With the development of fintech, financial service innovation has been further upgraded. Although financial transaction information appears to be more transparent on the surface, its basic algorithm still belongs to "black box operation", forming new information asymmetry. In addition, fintech regulation takes big data as an important reference basis, and a large number of fintech innovations make the regulatory response based on big data weak, which will increase the difficulty for regulators to identify big data. Reference data related to fintech may cause problems in financial regulation due to incomplete disclosure and human error screening of reference data. Therefore, policy makers and regulators in the information asymmetry

Under the premise, the risk operation situation of the regulated cannot be comprehensively evaluated, resulting in

the inability to make accurate and timely effective supervision.

(2) The concept of supervision is backward

The traditional supervision concept of our country is static supervision, which is the "post supervision" of financial technology companies according to the degree of violation after the occurrence of violations, based on the regulatory thinking of "problem emergence -- problem solving". This seems to be a reasonable regulation, but it will only be introduced when financial innovation grows to the extent that it endangers safety. Such regulation cannot keep pace with the rapid development of fintech. Due to the innovative nature of fintech, it is more diverse and changeable, and the regulatory measures formulated are difficult to adapt to new financial risks. Therefore, post-event financial regulation lacks certain flexibility. At the same time, due to the strong innovation capability of fintech, the lack of timeliness of financial regulation under the traditional mode of "discovery after the event, punishment after the event" may result in many regulatory blind spots and weak links caused by the untimely and asymmetric information acquired. Obviously, the traditional static regulation concept has been unable to adapt to the development of the volatile and trans-boundary fintech, and it is urgent to change the concept of financial regulation.

(3) The regulatory system is in urgent need of reform and innovation

At present, our country has formed "more than one yuan" type of separate supervision system, which is on the basis of the central government's comprehensive control of the financial supervision power, the financial competent authorities and other organs set up under the central government undertake financial supervision responsibilities for different areas. However, with the continuous development of fintech, there is a trend of cross-integration among financial businesses, which reshapes the traditional financial business model and develops from separate operation to mixed operation. Therefore, the original regulatory system suitable for separate operation is facing new challenges.

China's "one-dollar-multiple-head" financial regulatory system has drawbacks such as regulatory overlap and regulatory blind spots, which to a certain extent are easy to cause undetectable risks and fail to meet the practical needs of mixed operation and financial technology innovation and development. According to the characteristics of the cross-development of financial technology, it is urgent for our country to carry out adaptive reform of financial technology supervision system, explore the construction of multi-subject and standardized collaborative financial supervision system, and push the transformation from one-way supervision by regulatory authorities to multi-subject co-regulation gradually.

(4) Lack of necessary technical support

Financial technology risk supervision mainly depends on effective control of technological risks. Especially with the empowerment of modern technologies such as blockchain and big data, financial technology has put forward higher requirements for current regulation compared to traditional financial regulation. However, currently, China still faces the problem of relatively lagging regulatory technology development. For example, when Ant Financial set default access to user personal data in its "Sesame Service Agreement," the relevant departments lacked the ability to promptly identify and address these technical vulnerabilities. In addition, from the current development of domestic technology, only a few technology giants like Alibaba Cloud

have the ability to independently build cloud computing, while most other financial institutions rely on private cloud systems built by financial technology enterprises. This indicates that there are still significant shortcomings in China's regulatory capabilities in terms of technology. How to further improve financial technology risk supervision technology and fully utilize new technology to address regulatory challenges under financial technology is a practical problem that needs to be urgently solved in financial regulation for a long period of time in the future.

(5) Imperfect laws and regulations

As a composite emerging industry, fintech has not formed corresponding regulatory laws and regulations, and various regulatory departments lack reference standards when identifying specific business processes. For example, the prospectus of Ant Group shows that the loans formed by the company are mainly independently issued by financial institution partners, including about 100 policy banks, large commercial banks, agricultural commercial banks, etc. In the credit balance facilitated by the company's platform, 98% of the credit is actually disbursed by financial institution partners, with Ant Group providing credit accounting for about 2%. In this mode of joint loans, there are many risks for ant groups or banks. First, ant groups have high leverage ratio and weak risk management and risk tolerance; Secondly, although banks are the main creditors of loans, they mainly rely on the channels provided by Ant Group to obtain customers, which can lead to excessive reliance on technology platforms and neglect the detailed grasp of customer information. It was not until November 2, 2020 that the China Banking and Insurance Regulatory Commission issued new regulations on online loans, stipulating that in a single joint loan, the proportion of investment by small loan companies operating online small loan business should not be less than 30%, which limited the minimum proportion of investment by technology companies in joint loans.

In addition, taking Ant Group's suspension of listing as an example, Ant Group chose to list on the Science and Technology Innovation Board, indicating that it should be a technology company. The main business of this institution is digital payment, merchant services, and financial technology platform business. In the first half of 2020, digital payment and merchant services accounted for 35.68% of the revenue structure, while financial technology platform business accounted for 63.39% of the revenue. The financial technology platform business mainly charges commission fees by providing consignment services, such as selling wealth management products, insurance products, etc. to customers, so its true financial technology innovation business only accounts for less than 1%. From the data, it can be seen that the majority of Ant Group's revenue currently comes from traditional financial businesses, so it is essentially a company with financial attributes.

Both from the perspective of the lag between regulatory rules and current laws in China, and the lack of a standardized system for the commercial attributes of fintech enterprises by regulatory authorities, it indicates that there are still many imperfections in China's existing laws and regulations.

## **4. Measures and suggestions for fintech regulatory reform**

(1) Improve the information disclosure mechanism

Establishing and improving the information disclosure

mechanism is a very important step for both the development of fintech and the majority of financial consumers. It also plays a vital role in improving the risk prevention ability of fintech enterprises. I believe that technology can be used to improve the information disclosure mechanism. The problems brought by technological fintech also need to be solved by technological means. New technical means are used to strengthen the supervision of the basis of big data, avoid the supervision problems caused by human error screening of reference data, improve the professionalism and penetration of supervision, so as to further improve the information disclosure mechanism.

#### (2) Establishing a new regulatory concept

At present, the thinking of financial technology regulation is still in the stage of internet finance, which is not conducive to the effective implementation of supervision and management work at this stage. Therefore, corresponding regulatory departments should actively establish a new regulatory concept that adapts to the development of financial technology, and strengthen the depth, breadth, and frequency of regulatory penetration.

Currently, China's regulatory authorities have conducted many beneficial explorations and attempts. One is to shift from "static regulation" to "dynamic regulation". The formulation of regulatory rules has become dynamic, real-time and linked to the operation of fintech companies, adapting to the innovative development of fintech. Secondly, implementing penetrating regulation is an important innovation in improving financial technology regulation. This is a proactive and functional penetration supervision model that connects the source of funds, intermediate links, and final investment direction through penetration. Based on the principle of "substance over form", the nature of financial business and behavior is screened, and the entire process of supervision is implemented for the business and behavior of financial enterprises

Tube. In the banking industry, strengthening credit risk control requires banks to incorporate both on balance sheet and off-balance sheet businesses into unified credit management in accordance with the principle of penetrating supervision. In the trust industry, we urge trust companies to identify the ultimate investors of trust products upwards according to the "penetration" principle, while also identifying the underlying assets of the products downwards according to the "penetration" principle. In the security, fixed increase projects need to carry out penetration disclosure of information and penetration inspection of relevant subscribers. In the fund industry, for the ultimate investors of private equity funds, it is important to pay attention to thorough verification of whether they are qualified investors.

#### (3) Innovative regulatory mechanisms: introducing regulatory sandboxes

The "regulatory sandbox" is a regulatory system first proposed by the UK in 2015 to test financial innovation products, services, business models, marketing methods, etc. It can be understood as a "safe space" to shield external interference. Financial technology enterprises carry out financial product innovation and iterative certification within this "safe space" to achieve the purpose of eliminating false and retaining true regulatory purposes. The basic process is: financial technology institutions that want to join the regulatory sandbox apply, and the regulatory unit reviews them based on the inspection institution's own situation. Enterprises that fail to pass the application terminate the

testing or extend the processing. Enterprises that pass the application can enter the regulatory sandbox, and the regulatory agency will continue the inspection.

Enterprises that pass the evaluation by regulatory agencies can enter the market, while those that fail will be terminated or postponed for processing.

#### (4) Innovate regulatory tools and enhance regulatory technical capabilities

In the era of fintech 3.0, financial services are becoming more virtual, business boundaries are gradually blurring, and risks and hidden dangers are more hidden, complex, and spillover. If financial management departments and traditional regulatory tools are alone, problems such as poor regulatory effectiveness, low efficiency, and inconsistent standards are prone to occur. Therefore, optimizing and innovating regulatory tools is particularly important. Innovative regulatory tools should meet the requirements of handling the relationship between safety and innovation well. Innovative regulatory tools can fully mobilize the forces of all parties in society, creating a financial technology governance system that integrates institutional autonomy, public supervision, industry self-discipline, and government supervision.

The integration of technology and finance is in line with the trend of the times, and the use of technology regulation is the optimization and upgrading of financial regulation. Therefore, in the future, financial regulators not only need to have the ability to understand financial business and risk management, but also have higher requirements for their regulatory technical capabilities. At present, digitization is an important means to enhance regulatory capabilities. Therefore, we should closely follow the trend of digital development, continuously increase technology investment, build technology platforms with high starting points and standards, strengthen technology empowerment supervision, and quickly and accurately "prescribe medicine" for financial risk prevention issues. We need to comprehensively promote digital strategy, promote digital technology and various industries. Deeply integrating services, thereby enhancing regulatory technical capabilities and better adapting to the new financial ecosystem

#### (4) Improve the regulatory legal and regulatory system

China's financial technology development is generally at the forefront of the world, and there is no existing experience in laws, regulations, and risk supervision to learn from. At present, China's regulation of financial technology mainly relies on administrative regulations and departmental rules, supplemented by local regulations. Although it effectively regulates the operation of fintech and provides guarantees for its stable development, the law is the key to governing the country, and it is still necessary to formulate specialized laws for fintech regulation.

To formulate specialized laws on financial technology regulation, we need to achieve unity and coordination under the overall legal framework of China, integrate laws and regulations regulating financial technology regulation with civil and commercial law, criminal law, administrative law, economic law, financial law and other laws, and reduce conflicts between different laws and regulations. Therefore, the legislation on financial technology regulation needs to understand the communication and cooperation between various institutions involved in financial technology regulation and existing laws and regulations. For example, in the formulation process, it is necessary to clarify which

situations need to be adjusted by the current financial technology regulation, and which issues can be regulated by the existing legal system.

## 5. Conclusion

This article proposes to improve China's financial technology regulation from the following five aspects: starting from dynamic regulation and active regulation, establishing effective new regulatory concepts; Utilizing a forward-looking, flexible, and dynamic regulatory sandbox to improve regulation and address disruptive innovation brought about by the development of fintech; Using technological means to improve information disclosure and address information asymmetry issues; Innovate regulatory tools and enhance the regulatory technical capabilities of regulatory agencies; Develop specialized legislation on financial

technology regulation, clarify the positioning of financial technology regulation in financial development, and enable it to play its due value, with the aim of playing a positive role in financial technology regulation.

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