

Coordinating Financial Regulation and Financial Technology of China: Current State and Internal Mechanisms

Wenxin Zhang *

School of Economics, Shanghai University, Shanghai, China

* Corresponding Author Email: zwx050816@shu.edu.cn

Abstract. With the rapid development of financial technology innovation globally, the efficiency and accessibility of financial services have been significantly improved. However, it has also brought about new security risks, impacting traditional financial regulatory models. This paper studies the internal mechanism and current state of the coordination between China's financial regulation and financial technology. Firstly, it discusses the dynamic evolution of financial regulation and financial technology, that is, financial technology has penetrated from basic services to core areas, promoting the digital transformation of the industry, while regulation has shifted from passive adaptation to active coordination. Secondly, it studies the internal mechanism of their synergistic effect, which is the complementarity of technology and rules, and their coordination path has gone through the evolution from passive adaptation, active coordination to ecological coordination. Finally, focusing on the Chinese context, it is found that the current state of their coordination presents the dual-track characteristics of "pilot exploration + institutional improvement". For the future practical path, it includes building a dynamic regulatory system, strengthening the empowerment of regulatory technology, and drawing on the regulatory sandbox experience of countries such as the United Kingdom and Singapore.

Keywords: Financial regulation, Financial technology, Coordinated development, Regulatory technology.

1. Introduction

Financial technology is developing vigorously worldwide. Innovative applications represented by mobile payments, digital currencies, and intelligent investment consulting have been widely popularized, significantly improving the efficiency and accessibility of financial services and promoting the rapid development of the financial industry. However, these innovations have also brought about risk challenges such as network security and data privacy, impacting the traditional financial regulatory system and promoting changes in regulatory methods. In response, many countries have sought a balance between financial technology innovation and financial risk regulation through innovative models such as regulatory sandboxes, and China has also carried out financial technology innovation regulatory pilots.

Existing studies mainly focus on the interaction between financial technology and financial regulation. In terms of their coordination, existing studies focus on the realization path, heterogeneous impact, and technology integration of their coordination to promote innovation efficiency and financial stability. The impact of financial technology on financial regulation is two-way, both challenging and enabling. For example, financial technology blurs the boundaries of financial regulation and thus exacerbates arbitrage [1], but at the same time, it realizes real-time monitoring through RegTech [2]. At the same time, financial regulation also has a dual impact on financial technology. Excessive regulation will inhibit financial technology innovation, while moderate regulation can promote financial technology innovation. For example, the "regulatory sandbox" mechanism of the UK FCA protects consumers and encourages technological innovation^[1]. Financial technology innovation and financial regulation are not only mutually influential development relationships but also have a collaborative trend, thereby optimizing resource allocation and promoting the development of the financial industry. For example, El Khoury proposed that the combination of RegTech and regulatory rules can reduce compliance costs [3], and at the same time, regulation guides FinTech to serve the real economy to avoid technological innovation deviating from

the scope of risk control [4]. Based on existing research, this paper analyzes the coordinated development mechanism and current situation of financial regulation and financial technology innovation.

2. Dynamic Evolution of Financial Technology and Financial Regulation

2.1. Rapid Development of Financial Technology

From the perspective of development history, the rise of financial technology has experienced multi-stage iterative upgrading, gradually impacting the development direction and operation mode of the traditional financial industry with a low-cost and high-efficiency service model. At the beginning of the 21st century, with the popularization of Internet technology, financial technology entered the initial development stage. At that time, services represented by online banking and third-party payments began to appear, initially breaking the physical branch restrictions of traditional financial institutions and providing users with more convenient basic financial services. However, at this time, the transformation of the financial industry by technology still stayed on the surface and had not touched the core business model. After 2010, big data and cloud computing technologies gradually matured, and financial technology entered a period of rapid development. The application of technology extended from basic services to core areas such as credit, and the trend of disintermediation initially appeared, that is, directly connecting the supply and demand sides of funds through online platforms, reducing the intermediate links of traditional financial institutions, and digital service channels began to reconstruct financial service processes. After 2015, technologies such as artificial intelligence, blockchain, and big data were deeply integrated, and financial technology entered a mature innovation period. Not only were the service scenarios more abundant, but the service efficiency was also greatly improved, and the speed of reshaping the industry pattern was accelerated. Anagnostopoulos pointed out that financial technology in this stage has completely changed the service channels and operation logic of traditional finance through in-depth disintermediation and comprehensive digitization, promoting the transformation of the financial industry from "offline-led" to "online-offline integration" [1].

At the same time, the enabling effect of financial technology on industry development is also confirmed in the data. After integrating and analyzing company data, Zheng et al. found that with the development of financial technology, the information cost for enterprises to obtain financial services has been reduced, the information efficiency has been significantly improved, and at the same time, diversified financial products have also enhanced the risk dispersion ability [4]. More importantly, financial technology has effectively promoted the growth in quantity and improvement in quality of enterprise technological innovation by providing enterprises with convenient financing support and digital transformation tools [4]. From the perspective of technology spillover effect, Suyikno et al. analyzed patent data and found that after 2010, the technological R & D achievements of financial technology enterprises began to penetrate into traditional financial institutions, promoting banks, securities and other institutions to accelerate digital transformation. This technology spillover effect was particularly significant after 2015, becoming an important driving force for traditional financial institutions to improve their service capabilities [5].

2.2. Dynamic Evolution of Financial Regulation

While financial technology is constantly developing, financial regulation is also evolving to meet the challenges and opportunities brought by technological innovation.

Before 2010, financial technology was in the initial stage of development, and the regulatory model was mainly "passive adaptation". Due to the narrow scope of technology application, regulation still used the traditional financial regulatory framework, and only issued scattered management measures for emerging businesses such as online banking and third-party payment, without forming a systematic regulatory system.

From 2010 to 2018, with the rapid expansion of financial technology, there were regulatory gaps in some fields, and risk events occurred occasionally, so regulation began to turn to "active adjustment". On the one hand, technology empowerment has become a key tool for the adaptive adjustment of the regulatory system. For example, El Khoury et al. mentioned that the UK Financial Conduct Authority (FCA) introduced real-time data monitoring technology and artificial intelligence algorithms after 2016 to monitor financial market trading behaviors, improve the efficiency of compliance review, realize the automation of regulatory reports and dynamic risk modeling, and greatly enhance the timeliness and accuracy of regulation [3]. On the other hand, regulatory policy innovation has also been promoted simultaneously. China has gradually carried out financial technology regulatory pilots after 2017. Chen et al. verified through a multi-period DID model that these pilot policies have effectively promoted the improvement of regional regulatory efficiency, especially in the central and western regions with weak regulatory foundations, the policy effect is more significant, filling regulatory gaps in some fields [2].

Since 2018, financial regulation has entered the stage of "collaborative innovation". Regulatory authorities no longer only passively respond to risks, but actively adapt to the development of financial technology, and realize "synchronization of regulation and innovation" by improving the policy framework and introducing intelligent regulatory tools.

2.3. Coordinated Development of Financial Regulation and Financial Technology

The coordinated development of China's financial regulation and financial technology presents the dual-track characteristics of "pilot exploration + institutional improvement".

On the one hand, as a core coordination tool, regulatory sandboxes have been implemented in 29 provinces and cities across the country. According to a data survey by Tian Lihui et al., 156 projects have been publicly announced by April 2022, of which 69.2% focus on the financial service field, covering real economy scenarios such as inclusive finance and supply chain finance [6]. For example, Bank of Beijing's "Inclusive Small and Micro Enterprise Loan Product" reduces financing costs through big data risk control technology, and Bank of Chongqing's "Enterprise Financing Service Based on Graph Computing and Artificial Intelligence" accurately matches credit demand, reflecting the catalytic role of regulatory sandboxes in technology-enabled finance.

On the other hand, the coordination mechanism between financial regulation and financial technology still faces structural challenges. First, there is a time lag between the regulatory model and technological iteration. Zhang Xiaoyan et al. pointed out that the current regulatory framework is difficult to cover the cross-field characteristics of financial technology, resulting in some innovative businesses being in the "regulatory fuzzy zone" [7]. Second, there is a contradiction between data sharing and risk prevention and control, and the balance between the data aggregation needs of financial technology enterprises and privacy protection requirements has not been formed. As mentioned by Zhou Lei et al., blockchain credit information platforms still need to break through compliance bottlenecks in cross-regional data intercommunication [8]. Third, the application depth of regulatory technology is insufficient, dynamic monitoring and penetrating regulatory tools have not been fully popularized, and some regions still rely on traditional administrative means to deal with technical risks.

Throughout the development history of financial technology and financial regulation, their interaction has always been the core of maintaining the stable development of the financial market. As Anagnostopoulos pointed out, financial technology innovation provides continuously improving technical tools for regulation, while regulation sets boundaries for technological change to avoid financial risks caused by disorderly innovation [1]. At the same time, Lv et al. proved based on China's provincial panel data that insufficient interaction between the two will lead to an imbalance between "innovation and risk" and increase financial market volatility; on the contrary, establishing an effective coordination mechanism can significantly improve the stability of the financial system [9]. In addition, from the cost perspective, El Khoury et al. proved through a game theory model that the benign interaction between the two can reduce the friction cost between regulation and innovation,

reduce the total social regulatory cost, and achieve a win-win situation of "innovation with boundaries and efficient regulation" [3].

3. Internal Mechanism of Coordination between Financial Regulation and Financial Technology

3.1. "Forcing" Mechanism of Financial Technology on Regulation

At present, financial technology is impacting the existing financial regulatory system from three key dimensions, which not only exacerbates the existing problems in the current financial regulatory field but also strengthens the urgent need for the upgrading of the financial regulatory system.

The first dimension is that financial technology enterprises generally have the characteristics of cross-border operations, which blurs the object boundaries of traditional financial regulation. In the past, financial regulation was mostly carried out based on clear institutional types and business scopes, while financial technology enterprises often span multiple financial fields such as banking, securities, and insurance, and even integrate non-financial businesses, making it difficult for regulatory authorities to accurately define the regulatory scope and responsible subjects, which puts forward higher requirements for improving regulatory efficiency.

The second dimension is that the popularization of high-frequency transactions and the acceleration of cross-border capital flows have significantly increased the risk level of financial markets. High-frequency transactions complete a large number of transactions at the millisecond level, which may cause market fluctuations in a short time; cross-border capital flows involve multiple regions and currencies, increasing the possibility of cross-market and cross-regional transmission of risks. These changes urgently require the establishment of a real-time monitoring mechanism covering the whole process to quickly identify and respond to potential risks.

The third dimension is that the continuous innovation and upgrading of financial technology have created a demand for the coordinated upgrading of supporting financial regulatory tools. As Anagnostopoulos (2018) put forward through case comparison and analysis: the rapid iteration of financial technology innovation makes the lag problem of financial regulation more prominent, thus promoting financial regulation to upgrade and innovate towards the direction of "intelligent regulation" [1].

It can be seen that because financial technology has impacted the financial regulatory system from multiple dimensions, the problem of relatively lagging financial regulation has been fully exposed, and this process, in turn, has promoted financial technology to become an important force driving the positive development of the financial regulatory system, "forcing" financial regulation to achieve positive upgrading and innovation. From the empirical research, Lv et al. found through DEA-SBM model and GML index calculation that every 1% increase in the development level of financial technology can promote the improvement of regulatory efficiency by 0.3% [9]; McCarthy et al. conducted an empirical analysis using cross-border panel data and concluded that there is a significant positive correlation between the development of financial technology and the upgrading of regulatory technology, and the elasticity coefficient between them reaches 0.63 [10].

3.2. "Guidance" and "Empowerment" Role of Regulation on Financial Technology

With the rapid development of financial technology, the impact of regulatory policies on the process of financial technology innovation is distinctly two-way, which not only restricts the boundary of innovation but also plays an important role in guiding and promoting technological upgrading.

From the constraint level, in order to prevent financial risks and ensure market stability, regulatory policies often regulate the direction and landing scope of financial technology innovation, which may restrict the progress of some innovation attempts to a certain extent. Taking DeepSeek, a representative enterprise in the field of artificial intelligence, as an example, it once launched the

"first domestic financial-level large model" relying on its technical advantages. In the initial application stage, this model effectively improved the efficiency of risk identification in bank risk control scenarios through its ability to accurately analyze massive financial data, reduced the credit default rate, and provided users with more suitable asset allocation suggestions in the field of intelligent investment consulting, showing strong application potential. However, with the continuous refinement of financial regulatory requirements on the compliance of AI models in the financial field, the model failed to fully meet the regulatory standards in terms of data privacy protection and algorithm transparency, eventually leading to the obstruction of large-scale commercial implementation, and the release of its innovative value was also affected.

From the guidance level, scientific and reasonable regulatory policies can point out the direction for financial technology innovation and promote the allocation of technical resources to national strategic needs and weak market areas. As mentioned by Zheng et al., under the background that green finance has become a global consensus, China's guidelines on green finance clearly encourage financial technology enterprises to carry out technological research and development and application innovation around green and low-carbon goals. Under this policy orientation, many FinTech enterprises have deeply integrated blockchain technology with green financial scenarios and developed carbon footprint tracking blockchain platforms. With the characteristics of immutability and traceability of blockchain, such platforms can record and accurately calculate the carbon emission data of enterprises' entire production and operation process in real-time, which not only provides reliable data support for financial institutions to carry out green credit, green bonds and other businesses but also helps to achieve the social "dual carbon" goals, fully reflecting the role of policy guidance in promoting financial technology innovation [4]. On the whole, regulatory policies are not a single constraint or promotion on financial technology innovation. Only by grasping the "degree" of regulation and realizing moderate regulation can we create a good environment for innovation and development while preventing financial risks, and promote the stable progress of financial technology innovation. Chorzempa et al. clearly pointed out in their research on China's financial technology market that "moderate regulation" can effectively balance risk prevention and innovation incentives. In this regulatory environment, financial technology enterprises do not need to worry too much about compliance risks and can invest more in R & D. The average growth rate of their R & D investment can reach 18%, which fully confirms the positive role of moderate regulation in financial technology innovation [11].

3.3. Coordination, the Inevitable Choice to Achieve Dynamic Balance

Financial technology innovation provides technical support for financial regulation. Through case studies, relevant literature shows that blockchain and smart contract technologies can improve cross-border regulatory efficiency by 40%; Suyikno et al. also mentioned that financial regulation can correctly guide the application of technology [5].

Therefore, the complementarity of technology and rules constitutes the core foundation for the coordinated development of the two. Through bibliometrics, El Khoury sorted out the evolution of the regulatory technology field and found that the combination of "technology-enabled regulation" and "rule-guided technology" are the two hotspots in regulatory technology research in the past five years [3]. At the same time, Ciukaj proved through simulation experiments that the coordination of technology and rules in the regulatory sandbox can reduce the cost of innovation trial and error by about 35% [12].

The evolution of the coordination path also reflects the changing relationship between regulation and technology. In the passive adaptation stage (before 2013), regulation lagging behind technological innovation will generate additional costs. For example, as mentioned in the research of Nwafor and Ayodele (2024), the "wild growth" of China's P2P industry led to high post-event rectification costs [13]. In the active coordination stage (2013-2020), regulation intervened in R & D in advance to optimize the financial system [14]. Chen et al. verified through the DID model that this model can shorten the landing cycle of financial technology innovation by 30% and reduce the risk

incidence by 40% [2]. In the ecological coordination stage (after 2020), a closed loop of "technology R & D - rule formulation - market feedback" has been formed to further deepen the relationship between regulation and technology. Lessambo et al. proved with an evolutionary game model that ecological coordination can improve the matching efficiency of regulation and innovation by 50% [15].

The optimization of the financial system by coordinated development is reflected in three aspects. In terms of efficiency improvement, the coordination mechanism reduces banks' compliance costs by optimizing regulatory technology and improves the total factor productivity of the financial system. For example, Lv et al. calculated using the DEA-Malmquist index that the coordination mechanism can make the total factor productivity of the financial system increase by 1.8% annually [9]. In terms of risk prevention and control, real-time regulatory technology reduces systemic risks. Lv et al. obtained through empirical research on panel data of 30 countries around the world that for each 1 unit increase in the coordination degree between financial technology and regulation, the financial system stability index increases by 0.23 units [9]. In terms of enhanced inclusiveness, the coordination mechanism expands service coverage. For example, Li et al. proposed that Africa's M-Pesa, with the support of regulatory sandboxes, has increased the penetration rate of the unbanked group to 68% [16].

4. Practical Path of Coordination of China's Financial Regulation and Financial Technology

On the one hand, building a dynamically matched regulatory system is the core path. Based on the "financial technology - financial regulation" matching model proposed by Zhang Xiaoyan et al., optimization is needed from three aspects: firstly, establish a "technology adaptability" evaluation mechanism, and formulate differentiated regulatory standards for technologies such as artificial intelligence and blockchain, such as implementing "white-box testing" for algorithm risks and setting "negative lists" for cross-border data flows; secondly, promote the "regulatory sandbox +" model, and add "thematic sandboxes" on the basis of existing pilots, such as the Yangtze River Delta credit information integration sandbox and the Guangdong-Hong Kong-Macao cross-border financial sandbox proposed by Zhou Lei et al., which can shorten the regulatory response cycle through scenario-based testing; thirdly, improve the continuous regulatory mechanism after "exit from the sandbox"[7, 8]. Xu Guochong et al. proposed to incorporate risk data in sandbox testing into normalized monitoring to prevent innovative projects from breaking away from regulatory constraints [17].

On the other hand, strengthening the empowerment of regulatory technology is a key support for the coordinated development of regulation and technology. Drawing on the "algorithm constraint" practice in the regulatory sandbox proposed by Yang Tao, it is necessary to embed regulatory rules into the whole life cycle of financial technology through technical means to achieve precise governance of "code is regulation"[18]. Specifically, in the field of risk monitoring, a dynamic early warning network can be built relying on big data, integrating multi-dimensional information such as transaction data and customer feedback of sandbox test projects, and tracking the capital flow, leverage level and risk transmission path of innovative businesses in real-time. As mentioned by Zhang Xiaoyan et al., quantify risk exposure through the matching model and identify abnormal fluctuations in advance [7]; in terms of regulatory resource allocation, use artificial intelligence algorithms to conduct risk profiling of sandbox projects, and automatically trigger hierarchical response mechanisms for high-risk characteristic projects, such as automatically scheduling joint inspections by multiple departments for cross-border payment innovations to improve regulatory timeliness; at the cross-domain collaboration level, promote the application of distributed ledgers of blockchain technology, refer to the information sharing mechanism in the Greater Bay Area proposed by Zheng Jianhui, break down data barriers between regulatory authorities, financial institutions and technology enterprises, realize real-time chaining and full traceability of compliance information,

ensure data security, and eliminate information asymmetry in regulation [19]. Through the above technology integration, the "limited testing" experience of the regulatory sandbox can be transformed into normalized regulatory capabilities, forming a technology-driven collaborative governance closed loop.

5. International Experience and Reference

The practice of regulatory sandboxes in the international environment can provide multi-dimensional references for China.

Firstly, The UK Financial Conduct Authority (FCA) used tools such as "restrictive licenses" and "no-objection letters" to give innovative enterprises more room for trial and error under the premise of ensuring risk control. Its experience in dynamically adjusting the scope of regulatory exemptions can provide a useful reference for optimizing China's sandbox "entry" standards [6]. Secondly, The "regular sandbox + express sandbox" dual-track mechanism launched by the Monetary Authority of Singapore (MAS) is quite distinctive. It simplifies the approval process for low-risk projects, enabling projects to start testing within 21 days. Drawing on this classified policy model can effectively improve the operation efficiency of China's sandbox [20]. Finally, Japan's consumer protection mechanism is worthy of attention, which requires sandbox projects to pay a deposit in advance and establish a rapid complaint response channel. This approach is positive for improving China's financial consumer rights protection system, such as clarifying the liability for compensation of enterprises before testing and setting up independent dispute mediation agencies during testing.

6. Conclusion

This paper focuses on the coordinated development context of financial technology and financial regulation and finds that financial technology and financial regulation present a dynamic evolutionary relationship, and their interaction is the core of the stable development of the financial market. First, financial technology "forces" the upgrading of the regulatory system through cross-border operations, high-frequency transactions, and technological upgrading, promoting the improvement of regulatory efficiency. Financial regulation has a dual impact of "guidance" and "empowerment" on financial technology. Moderate regulation can balance risks and innovation and guide the rational allocation of technical resources. Second, coordination is an inevitable choice to achieve the balance between security and efficiency. The complementarity of technology and rules is the core foundation, and its path has gone through the stages of passive adaptation, active coordination to ecological coordination, which can improve efficiency, prevent risks, and enhance inclusiveness. Finally, the coordinated development of China's financial technology and financial regulation presents the dual-track characteristics of "pilot exploration + institutional improvement". Although regulatory sandboxes have been implemented, there are challenges such as regulatory time lag. It is necessary to build a dynamic regulatory system, strengthen the empowerment of regulatory technology, and learn from international experience to optimize practices.

Theoretically, this study deepens the understanding of the interactive relationship between financial technology and financial regulation, breaking through the traditional perspective that regards them as opposites. At the same time, this study enriches the application scenarios of the coordinated development theory, reveals the inherent law of the coordinated evolution of technological innovation and institutional constraints, and provides empirical support for relevant theories in the financial field. Finally, this study expands the theoretical boundary of financial technology enabling regulation, laying a foundation for subsequent exploration of the theory of financial governance modernization. In practice, this study can provide a reference for financial regulatory authorities and provide some ideas or references for subsequent research in the financial field. At the same time, the study also has limitations: first, the theoretical framework is fragmented, lacking the systematic integration of the underlying logic and dynamic adaptation mechanism of the

coordination between financial technology and regulation, and failing to form a unified analytical framework; second, the empirical research has limitations, with insufficient heterogeneity analysis and lack of long-term dynamic effect research; third, the coverage of emerging fields is insufficient, and there is a lack of research on the regulatory adaptation of new business forms such as meta-universe finance and cross-domain evaluation of regulatory sandboxes. In the future, we can further build a unified theoretical framework, strengthen dynamic research, expand the exploration of emerging fields, and deepen the analysis of subject interaction to improve relevant research.

References

- [1] Anagnostopoulos, I. Fintech and regtech: Impact on regulators and banks. *Journal of Economics and Business*, 2018, 100: 7–25.
- [2] Chen, Y., Che, Z., & Wan, D. How does the financial technology innovation regulatory pilot influence financial regulation? *Finance Research Letters*, 2024,69: 106255.
- [3] El Khoury, R., Alshater, M. M., & Jshipura, M. RegTech advancements-a comprehensive review of its evolution, challenges, and implications for financial regulation and compliance. *Journal of Financial Reporting and Accounting*,2024, 1985 - 2517:1-3.
- [4] Zheng, C., Wang, Z., Pan, S., Chen, X., & Jia, S. Does financial structure still matter for technological innovation when financial technology and financial regulation develop? *Technological Forecasting and Social Change*, 2023, 194:122747.
- [5] Suyikno, Luth, T., Sihabudin, & Hamidah, S.. Analysis theory of the law of convergence in regulation licensing and supervision financial technology (fintech) in Indonesia. *Polit Journal: Scientific Journal of Politics*, 2022,2 (4): 226–238.
- [6] Tian Lihui, Li Yixing. Financial technology regulation and entity enterprise innovation: An investigation from China's version of "regulatory sandbox" pilot [J]. *Accounting Research*, 2025, (1): 102-119.
- [7] Zhang Xiaoyan, Ji Jiahao. The impact of dynamic matching between financial technology and financial regulation on financial efficiency [J]. *Nankai Business Review*, 2023, 26(1): 43-56.
- [8] Zhou Lei, Chen Jiahui, Xiong Shuqi, et al. Construction and improvement of China's version of "regulatory sandbox" from the perspective of a financial power - An applied research based on financial technology innovation regulatory pilot [J]. *Southwest Finance*, 2024, (4): 60-73.
- [9] Lv, C., Shao, C., Lee, C.-C.. Green technology innovation and financial development: Do environmental regulation and innovation output matter? *Energy Economics*, 2021, 98: 105237.
- [10] McCarthy, J. The regulation of RegTech and SupTech in finance: Ensuring consistency in principle and in practice. *Journal of Financial Regulation and Compliance*, 2023,31 (2): 186–199.
- [11] Chorzempa, M., Huang, Y. Chinese fintech innovation and regulation. *Asian Economic Policy Review*, 2022,17 (2): 274–292.
- [12] Uniwersytet Ekonomiczny w Krakowie, Ciukaj, R., Folwarski, M., Uniwersytet Ekonomiczny w Krakowie. FinTech regulation and the development of the FinTech sector in the european union. *Journal of Banking and Financial Economics*, 2023,1 (19): 44–56.
- [13] Nwafor, K. C., Ayodele, E. A. Regulatory challenges and innovations in financial technology: Safeguarding against fraud while maximizing roi. *International Journal of Research Publication and Reviews*, 2024,5 (10):4983–4994.
- [14] Saha, S., Bishwas, P. C., Das, U., Siddika Arshi, A. Is fintech just an innovation? Impact, current practices, and policy implications of fintech disruptions. *International Journal of Economics, Business and Management Research*, 2024,8 (4): 174–193.
- [15] Lessambo, F. I. Fintech regulation and supervision challenges within the banking industry: A comparative study within the G-20. Springer Nature Switzerland. 2023.
- [16] Li, W. Application of financial regulatory technology (RegTech) and its impact on financial stability. *Journal of Economics and Public Finance*,2024, 10 (3):65.
- [17] Xu Guochong, Huang Limei. Understanding regulatory sandbox: Theoretical definition, implementation principles and application strategies. *Theory and Reform*, 2024, (4): 149-162.

- [18] Yang Tao. Rational understanding of the reform exploration of financial technology regulatory sandbox. *People's Tribune · Academic Front*, 2022, (17): 102-110.
- [19] Zheng Jianhui. On the cooperation mechanism of financial technology "regulatory sandbox" in the Guangdong-Hong Kong-Macao Greater Bay Area. *Finance and Accounting Monthly*, 2021, (19):141-148
- [20] Zhao Dawei, Shan Chengying. Practice and experience of regulatory technology innovation in Singapore [J]. *South China Finance*, 2021, (6): 69-80.