

Analysis and Enlightenment of the "Regulatory Sandbox" Model for Financial Technology Innovation

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Abstract: The application of the "regulatory sandbox" model in China's financial technology innovation supervision pilot has achieved positive results, with 83 "box" financial technology innovation projects benefiting people and enterprises landing, releasing market vitality, and enhancing the ability of financial services to the real economy. However, with the expansion of the pilot project "from point to surface", the article takes the "regulatory sandbox" model pioneered by the UK as an example to analyse the operational mode and significance of the "regulatory sandbox" and believes that incorporating financial technology innovation into the regulatory sandbox for regulation is an effective technical approach to solve the problems of financial technology, including internet finance regulation in China. On this basis, corresponding policy recommendations were proposed from the perspectives of financial technology regulatory strategy, regulatory logic, and regulatory information sharing mechanism.

Keywords: Analysis and Enlightenment, Regulatory Sandbox , Financial Technology

1. INTRODUCTION

FinTech is a technology driven financial innovation. With the development of new generation information technology, such as artificial intelligence, blockchain, cloud computing, big data, and the deep integration of finance and technology, financial technology innovation has become an important driver to enable financial transformation and upgrading, enhance financial inclusion, and improve financial service capabilities. However, the cross market, cross business and cross time and space characteristics of FinTech also make credit risk, Liquidity risk, network risk and information security risk more prominent, which has brought significant adjustments to the traditional regulatory model. To meet the needs of financial innovation and risk prevention and control, the Financial Conduct Authority (FCA) took the lead in proposing the "regulatory sandbox" model.

From the scandalous lending platform business model of P2P to the characterization of ICO as illegal fundraising and the closure of domestic Bitcoin trading platforms, we can see that the risks of fintech cannot be underestimated. The main body of fintech is still finance, and technology is only a carrier serving finance. Therefore, the financial attributes of fintech itself determine its high-risk characteristics, and the application of technology in financial products makes it more difficult to detect risks. At the same time, business transactions between different industries in the market make various risks intertwined and difficult to distinguish, making it easy for regulatory authorities to fail and shirk their responsibilities in the process of separate operations and supervision.

In response to the rapid development of fintech, many financial regulatory authorities in many countries have introduced flexible regulatory systems. Although specific arrangements vary, the overall goal is for the fintech industry to adapt flexibly to the current regulatory system and provide convenience for regulatory authorities to track the development of fintech. The coupling development of financial innovation and technological innovation is an irreversible innovation trend, but it will also bring a series of regulatory difficulties. On the one hand, with the continuous

innovation of technology, the hidden risks will become more dispersed, and the operational risks of information technology will also increase, increasing the possibility of regulatory gaps and regulatory arbitrage. On the other hand, the integration of finance and technology will lead to an overall increase in risk levels. The combination of finance and technology may not only improve consumer welfare, but also introduce high-risk customer groups, which may affect the correct assessment of financial risks or cause mispricing, leading to an increase in the risk level of the entire industry.

In terms of the basic principles of financial supervision, preventing financial Systematic risk, stabilizing the order of financial market, and correcting the information asymmetry of financial market are all measures of financial supervision, so it is feasible to start from the financial supervision system to resolve risks. However, in terms of China's current financial regulatory system, whether it is financial legislation, regulatory system, or self-discipline supervision, it has shown an inability to adapt to the supervision of financial technology innovation.

The 'regulatory sandbox' is the application of the sandbox model in the financial field, allowing fintech companies to practice their innovative products, service processes, and business models in a real but controlled environment. Regulatory agencies can deepen their understanding of relevant technologies, adjust, and improve regulatory rules based on the performance of innovative models in the 'sandbox', and by monitoring the testing process and evaluating the test results, it is determined whether the enterprise is officially authorized to promote its innovative achievements outside the sandbox. The main challenge faced by current fintech is the balance between development and risk regulation.

2. THE PROPOSED METHODOLOGY

2.1 The Development Trends of the "Regulatory Sandbox" Model

The 'regulatory sandbox' solves the dilemma faced by financial regulatory authorities. Firstly, the 'regulatory sandbox' provides a simulated market environment in which

fintech products can be traded for simulation purposes; Secondly, a bridge has been built between regulators and fintech companies. In this way, not only FinTech start-ups can make bold innovations within the specified scope, but also the regulatory authorities can keep abreast of financial innovation at any time, accumulating experience for later formulation of FinTech policies and regulations. The 'regulatory sandbox' is like a reform pilot zone, allowing for real or virtual testing of new fintech products or services in a controllable testing environment. This model simplifies market access standards and processes within a limited scope, exempts the application of certain regulations, and allows new businesses to quickly land and operate under the premise of clearly protecting consumer rights. It can also be promoted based on its testing in the sandbox.

The regulatory sandbox model is first and foremost beneficial for the development of technology enterprises, providing regulatory pilot zones for emerging formats such as fintech and new finance, and supporting the development of start-up finance or fintech enterprises. From the perspective of the coupling of financial innovation and technological innovation, on the one hand, the coupling development of financial innovation and technological innovation needs policy support and encouragement at the initial stage; On the other hand, there are many potential risks behind the coupled development of the two, which will have unpredictable impacts on the financial system and require more effective regulation and regulation.

With the rapid development of the coupling between finance and technology, China's traditional regulatory model will be difficult to meet the various needs of the coupling process. Building a flexible, inclusive, and forward-looking regulatory framework is extremely important for the coupling development of the two innovative systems. It should not only promote the practical development of technology finance, but also protect the rights and interests of financial consumers and maintain market stability. In the process of building a new regulatory system driven by technology and led by data, the functional value of the "regulatory sandbox" mechanism is mainly manifested as: embedding the concept of financial inclusivity, making it more flexible in terms of operational space and elastic range; Highlighting the core value of protecting consumer rights and ensuring the security of customers' financial information. We have established a proactive and adaptive new regulatory system, which has effectively achieved interaction between regulatory agencies and innovative enterprises. In short, the "regulatory sandbox" can effectively reduce the game cost of regulation and improve regulatory efficiency.

2.2 The Coupling Mode of Financial innovation and Technological Innovation in China

In the process of implementing the "regulatory sandbox" model, financial regulatory authorities should develop and clarify complete processes and maintain relative stability. From the perspective of the implementing entities, the implementation of the "regulatory sandbox" in most countries or regions is the responsibility of government regulatory agencies that carry out unified supervision of the financial industry and carry out top-level design, providing legislative or policy guarantees. From the perspective of regulatory objectives, most countries or regions focus on the principle of competitive neutrality in the "regulatory sandbox" testing, which is open to both licensed and non-licensed institutions.

The regulatory sandbox adopts a dynamic regulatory approach to conduct real-time market monitoring of financial technology products that enter the sandbox for testing. Whether it is the transaction volume, cash flow, target audience, applicable regulatory measures, etc. of the product, these data are all truthfully and completely recorded.

Regulatory authorities can use this data to understand the true situation of the fintech company and predict the future development prospects of the product, thereby deciding whether to launch the tested product on the market. The introduction of the 'regulatory sandbox' has greatly expanded the connotation of 'financial consumer protection'. The existing protection of financial consumers is based on behavioral finance, information asymmetry and other economic theories, focusing on the protection of consumers' rights and interests, such as the right to know, the right to consume freely, the right to fair trade, the right to confidentiality and security, and the right to seek compensation.

The introduction of the "regulatory sandbox" will base the connotation of protection on "rights protection" but higher than existing rights. In the relevant documents released by the UK FCA and the Singapore monetary authority on the regulatory sandbox mechanism, it has repeatedly emphasized consumer benefits, including reducing prices, improving service quality, more mutually beneficial transactions, enhancing convenience and availability, helping consumers identify and mitigate risks, etc. This fully demonstrates that the underlying logic of the "regulatory sandbox" is to promote effective competition in the financial market, which will benefit consumers. Scientific and technological progress cannot be separated from the support of finance. The continuous development and application of technology need the support of financial capital. At the same time, financial innovation can rely on the development and application of modern technology in the financial field for continuous development. Finance has powerful information gathering and processing functions. In the coupling of financial innovation and scientific and technological innovation, it is necessary to make full use of this feature of finance, and at the same time, with the support of electronic technology and professionals, to achieve the effective interaction between the two innovation systems and achieve the purpose of gathering, integrating, and optimizing various scientific and technological financial resources.

At the same time, based on the analysis of the impact of "regulatory sandbox" on the coupling model of financial innovation and scientific and technological innovation, we should use the idea of "regulatory sandbox" to realize the interaction between regulation and innovation and promote its stable and sustainable development. Financial technology innovation has not changed the essence of finance, and the regulatory bottom line of testing projects must not be exceeded. On the surface, the testing projects of the "regulatory sandbox" mechanism use artificial intelligence and other technologies and have undergone various forms and contents of innovation in financing, insurance, payment, and settlement fields. However, in essence, these innovative projects have not changed the fundamental attributes of financial business. Various innovative technologies are still applied to China's financial field, and a relaxed regulatory environment must have a bottom line. From the perspective of testing methods, Regulatory authorities will comprehensively consider institutional and project perspectives, based on the size of the fintech market within the country or region.

3. CONCLUSION

China can start from its own national conditions and draw on advanced regulatory technologies from abroad to promote the matching of regulatory technology with the development of financial technology and improve the safety and efficiency of the financial market. Therefore, only by deeply integrating technology and regulation without harming financial stability and consumer rights can we further promote the innovative development of financial technology. It is necessary to promote the integration of blockchain, Big data, artificial intelligence and other technologies, build a new "regulatory sandbox" model that adapts to the characteristics of FinTech, provide a safe and convenient testing environment for FinTech innovative applications, select and cultivate projects with strong innovation, wide application and good demonstration, achieve a virtuous circle between regulatory technology and FinTech, and promote the high-quality development of FinTech.

4. REFERENCES

- [1] Wang Dingxiang and Zhai Ruoyu. International Experience and Policy Implications of Financial Technology's "Regulatory Sandbox" [J]. Contemporary Financial Research, 2021, 000 (005): 100-108
- [2] Zhu Koda. International Practice and Enlightenment of Financial Technology's "Regulatory Sandbox" [J]. Zhejiang Finance, 2018 (4): 9. DOI: CNKI: SUN: ZJJR0.2018-04-002
- [3] Sun Yunwen. Analysis and Exploration of the "Regulatory Sandbox" Model in Financial Technology Regulation [J]. China Business Review, 2018 (32): 2. DOI: 10.19699/j.cnki. issn2096-0298.2018.32.034
- [4] Zhou Lei, Zhu Yi, and Hu Ruolan Research on the Application of the "Regulatory Sandbox" Model in Pilot Financial Technology Innovation Supervision in China [J]. Science and Technology Entrepreneurship Monthly, 2022, 35 (1): 6
- [5] Fang Yufei. Legal Analysis of Sandbox Regulation [J] [2023 07 24]
- [6] Liang Jia. Innovation in Financial Technology Regulation [J] [2023 07 24]
- [7] Sun Wenjie, Zhang Huiyi. Construction of a Local Financial Supervision Model Based on "Regulatory Sandbox+Departmental Supervision" [J]. Financial and Accounting Communication, 2022 (6): 147-150
- [8] Xia Zhihan. The Impact of Financial Technology on Financial Regulation - Taking "Sandbox Regulation" as an Example [J]. Brand Research, 2020, 000 (005): 178-179. DOI: 10.3969/j.issn.1671-1009.202034.146
- [9] Rumble. UK Experience in Financial Technology Innovation and Regulatory Sandbox [J]. North China Finance, 2018 (7): 6. DOI: CNKI: SUN: JRSC0.2018-07-004
- [10] Wang Jinqiu. Analysis of the Application of Graph Theory in Middle School English Reading Teaching [J]. Education Progress, 2023, 13 (6): 4. DOI: 10.12677/AE.2023.136623
- [11] Jin Wanshu. Research on the Regulatory Mechanism of Financial Technology Innovation in China: Inspiration from the International "Regulatory Sandbox" Mechanism Experience [J]. North China Finance, 2018 (11): 5. DOI: CNKI: SUN: JRSC0.2018-11-006
- [12] Rumble, Chai Ruijuan. The Enlightenment of Sandbox Regulation in the UK and Singapore on the Innovation of China's Financial Regulatory System [J]. Hainan Finance, 2017 (10): 44-50. DOI: 10.3969/j. issn.1003-9031.2017.10.07
- [13] Xu Aihuan, Zhao Junhao, Yang Sirui. Practical Experience and Several Revelations on the Development and Supervision of Financial Technology Abroad [J]. Hainan Finance, 2022 (4): 8
- [14] Fan Yunpeng, Zhao Xuan. Experience and inspiration from the "regulatory sandbox" of Australian fintech [J]