



# An Analysis of the Smart Financial Mode and Reform Path of Small and Medium-sized Financial institutions

Hongfei Li

Shengbao College of Financial Technology, Geely University, Chengdu, China

Email: lhfhv@163.com

**Abstract.** The development and popularization of smart finance has a greatly incentive and promoting role in the transformation of China's financial sector, especially for small and medium-sized financial institutions. From the perspectives of data analysis, intelligent decision-making service, all-round interconnection and collaborative social division of labor. This paper discusses the ways and countermeasures of smart finance to analyze the business transformation and model innovation of small and medium-sized financial institutions.

**Keywords:** smart finance model of small and medium-sized financial institutions, business transformation, path analysis.

## 1 Introduction

At present, driven by the rapid development of digital economy, new business forms and new models of smart finance, such as artificial intelligence technologies of big data, cloud computing and robotics, which deeply integrate with the financial industry, are rapidly expanding and popularizing in China. The innovative development of financial technology can play a good role in promoting the development of smart finance from multiple aspects and perspectives.[1]

Smart finance promotes not only the reform of China's financial business model, increases the special strength of financial service entities, but also improves the operation ability, work efficiency and enterprise performance of the financial industry, especially small and medium-sized financial institutions. Small and medium-sized financial institutions are an important part of China's financial industry, which play an irreplaceable role in serving the real economy and promoting China's economic development. In the era of smart finance, it is of great significance to improve the operation strength, efficiency and innovation ability of smart finance of small and medium-sized financial institutions to promote the development of small and medium-sized financial institutions and improve the degree of smart finance in China's financial industry. This paper uses the theories and methods of finance and management to discuss the transmission path of smart finance to improve the operation efficiency of small and medium-sized financial institutions on the basis of analyzing the

business reform of small and medium-sized financial institutions to adapt to smart finance.

## **2 The Theory, Practice and Related Research of Smart Finance**

Smart Finance is a comprehensive integration of artificial intelligence and finance. With big data, cloud computing, block chain and other high and new technologies as the core elements, it fully enables financial institutions, improves the operation and service efficiency of financial institutions, and realizes the intelligent, personalized and customized financial services. Smart finance is a technology-driven financial innovation, aiming to use modern scientific and technological achievements to transform or innovate financial products, business models and business processes, to promote the quality and efficiency of financial development.[2] Now, smart finance based on information technology has almost expanded to all institutions, businesses and links in the financial industry.

Smart finance is also a new form of business with the deep integration of artificial intelligence technology and financial industry. While the literature on the effects of financial development is large, relatively few studies have examined whether and how financial structure—the mix of financial institutions and the services that they offer—matters for economic growth and inequality. Moreover, the literature has been largely silent about whether the relationships between financial structure and firm outcomes (performance and access to finance) change as a country develops. The group of papers published in this special section helps to fill those gaps in the literature.[3] It is a financial model reform that replaces and surpasses the human operation and management experience and ability with robots. This model goes beyond the physical limitations such as payment and network, and processes massive and multi-dimensional unstructured information efficiently and instantly, and obtains customers in a broader range. On the basis of respecting the laws of finance, it provides decision support for various financial businesses.

Smart finance based on AI (artificial intelligence) technology and the financial Internet of Things is an important manifestation of the development of the financial industry in the digital economy era. The financial technology (fin-tech) revolution brought about by the development of the internet in the late 20th century, represented by electronic banking and online stock trading models. The invention and application of internet technology have greatly facilitated the collection, storage and transmission of information and data, and its effect on finance has actually occurred very early. In 1981, E-Trade was established; in 1995, Internet insurance company Ins Web was established and Internet bank Security First Network Bank was founded. In the early 2000s, the emergence of mobile Internet created new financial services and products, which improved the accessibility, simplicity and effectiveness of the financial services industry. As financial technologies continue to evolve, industries such as online lending, robotics consulting, digital banking and digital securities, and platforms such by Coin base that offer digital assets to buy, sell and hold cryptocurrencies and secure

tokens continue to emerge and further integrate. The formalization construction of China's financial industry began in the mid-1980s, and at present, a relatively perfect financial service system with the application goal of computer technology has been formed.

Smart finance is a technology that helps to reduce transaction costs, improve transaction efficiency and improve transaction quality. Thanks to the more accessible, more secure and more innovative licensing of financial services, the "blowout" growth of customers choosing mobile and online banking products and services, traditional financial institutions and fin-tech companies are increasingly integrated, The financial industry is entering a new stage of the combination of finance and technology, —— intelligent finance.

The open financial information system has reconstructed the traditional closed financial system, and presents the following different characteristics from the traditional finance: Centralized business service; Digital products and services; and Humanized customer service; and Systematic and high-end service

In the face of the rapid development trend of smart finance, businesses and academia at home and abroad have also conducted in-depth research on this. William Gozman, a well-known financial history expert and professor of finance and management at Yale University said: " Finance is a kind of technology —— a network of tools and institutions to solve complex problems of civilization. This technology is about the flow of value across time and space, using contracts, institutions, and documents to realize the essentially imaginary promise of future earnings.[4] Accentuate, the world's largest listed consulting companies and ranked 279 on the fortune one of the world 500 companies, in 2020, lists the intelligent financial in payment, personal credit, corporate credit, asset management (intelligent matching and improve efficiency) and insurance of six application scenarios, and think is the top priority intelligent financial development of the future. With the breakthrough of algorithm and data, the application of intelligent finance first works in the general industry to improve efficiency; With the accumulation and integration of data in the segmentation field, the application of intelligent finance continues to expand the direction of each segmentation scene and improving business efficiency, showing a diversified financial application layout.[5]

Adhering to the concept of "customer-centered", with the help of massive data and increasing computing models, intelligent finance accurately predicts and meets various financial needs of customers in real time, pays attention to the landing scene of artificial intelligence, and shapes the financial value chain and financial ecology. At the same time, we will practice the principle of inclusive finance and continuously expand the breadth and depth of financial services.

The evolution route of smart finance is: financial formalization internet finance financial technology smart finance. In recent years, it has successively realized the transformation from enterprise structure to enterprise operation mode, business philosophy, business model and operation mode in the whole traditional financial institutions. China's financial industry is also in a rapid transformation to smart finance.

The new business form of smart finance benefit to the small and medium-sized financial institutions. They are at a disadvantage in terms of customer acquisition, fi-

nancing, pricing and risk control. Most of them serve small and medium-sized enterprises or the field of "agriculture, rural areas and farmers". The existing financial examination and approval system is rigid, the decision-making efficiency is low, and other "stubborn diseases" cannot timely meet the capital needs of the above customers, such as the small amount, urgent use time, high frequency, and diverse use. Artificial intelligence technology can quickly screen and analyze big data to help decision-makers make decisions more efficiently to meet such funding needs. At the same time, according to the needs of customers, we can also develop more products that meet customer needs to better meet the personalized needs of customers.

In addition, smart finance, including the application of block chain, will improve the enterprise credit system and intelligent matching, reduce the cost in financial operation, improve the transaction rate, capital liquidity, and promote the digital transformation of banks.

### **3 Business Process Engineering of Smart Finance**

Through the financial cloud, smart finance enables the financial industry to achieve a comprehensive wisdom improvement in terms of business process, business development and customer service. The wisdom of financial business, financial management and financial risk avoidance is a new business form that is different from traditional finance. Its specific manifestations are as follows:

(1) Process domineering of smart finance. It includes Intelligence operation of business (KYP);[6] Wisdom development of business; Smart Service for customer(KYC);[7] and Smart Risk management.

The big data and artificial intelligence technology can help financial institutions to monitor and manage risks, and to improve the repayment rate and credit quality of loans.

(2) Intelligent financial management.

It includes the scenario enables intelligence.; market game is intelligent; Intelligent management mode.

Financial institutions of products, customers, channels, process, risk is not on the basis of large data analysis, including market positioning, user division, product planning, price strategy, advertising planning, promotion, partners, financial services, make financial service institutions to provide customers with timely, diverse, convenient service, to enhance the competitive advantage, market opportunities.

(3) Financial market business has rich data assets, stable and efficient infrastructure support, and rich application scenarios. The digital transformation of financial market business for small and medium-sized banks should be combined with their own characteristics, starting from the front, middle, and back end scenarios.[8]

### **4 The PRST Environment Analysis of Smart Finance**

The PEST model, proposed by Francis Aguilar, a Harvard professor of economics (1967) [9] explains the importance of the external environment to the development of

the enterprise. The model can also be used in the external environment for the development of smart finance.

P in PEST is Politics, (political environment), E, Economy (economic environment), S, Society (social environment), and T (Technology, technical environment).

The political environment includes the political system, the government policies such as industrial policies, relevant laws and regulations, etc.

During the period of 14th Five-Year Plan, China should continue to strengthen the financial rule of law construction. It needs to strengthen financial legislation. The main contents of the economic environment include the level, scale, growth rate of economic development, revenue and expenditure of government, and inflation rate. The legal system framework of social environment and finance has laid the institutional foundation for deepening the reform of the financial industry. Population, values, moral level and so on. Technological environment involves breakthroughs in high and new technology, process technology and basic research. It needs to promote technological and financial innovation. It will play a bigger role in accelerating the research, development and application of new products and processes, strengthening technology integration and business model innovation. Strengthen financial innovation means or enrich financial service scenarios, and realize digital, intelligent and ecological economic activities. In addition to the general macro environment, the smart finance industry also meets some special environment such as investment and financing, data barriers, business barriers, and the development trend of the market pattern, market competition pattern (brokerage, bank, fund, insurance and smart bank drivers).

From the perspective of political environment, the stable domestic political environment, government supply-side reform and double-cycle development strategy are conducive to the development of smart finance industry. Economic environment provides conditions for rapid development for the smart finance. The special macro-environment plays an important role in the development of smart finance industry. Because smart financial companies must live in the special environment. It also be called an externality. The macro external environment is uncertain, which is manifested by the economic subject for the future economic situation, especially the distribution range and state of benefits and losses. Therefore, externality have an important influence on the development of the smart financial institutes.

## **5 The Development Path of Smart Finance**

The development path of smart finance should include Continue to develop fin-tech and lay the foundation stone of smart finance; optimize the business process and improve the quality of smart finance; compliance operation. Abide by the national laws and regulations, abide by the operation principles of the market economy, comply with the legal operation; strengthen services to small and medium-sized institutions, and practice inclusive smart finance; and It needs to promote financial security, and expand and manage inclusive finance market to promote common prosperity.

## 6 Conclusion

Smart finance is showing a booming development trend. It is a major difficult task of accelerating the development of financial technology, promoting financial innovation of science and technology in the established internal and external environment, realizing the wisdom of financial process re engineering, and formulating the corresponding wisdom of financial development strategy. It need to follow the law of smart financial development and the existing development path, take practical and effective policy to gradually implement.

## Reference

1. Xu Dong, Exploring the development ideas of smart Finance, Time Finance, 2021, No.18,3-4,52,3 pages.
2. Shaw,E. FinancII also Deepending In economic development New York, Oxford university press, 1973.
3. Financial Stability Board, FSB.
4. William Gozman, Millennium Financial History: How Finance shapes Civilization, from 5000 years ago to the 21st century, translator, Zhang Yaguang, Xiong Jinwu, CITIC Press, 2017-07.
5. Smart Win the Future —— Intelligent Finance Survey Report with AI", MBA Think Tank.
6. Basel Committee on Banking Supervision,1988.
7. Basel Committee on Banking Supervision,1988.
8. Chen Rongrong, Exploring the Digital Transformation Path of Small and Medium sized Bank Financial Market Business, "China Money Market", Issue 11, 2022 | 6-11 | of 6 pages.
9. Francis J. Aguilar, Scanning the Business Environment, 1967.

**Open Access** This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

