

Research on the Direction and Strategy of Financial Science and Technology to Promote the Development of Financial Inclusion

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Abstract For the development of financial inclusion in China, the emergence and development of financial science and technology has played an important role. Among them, with the gradual improvement of the social system, financial inclusion is used more and more widely, which can solve the situation that credit enterprises and credit amount can't meet the needs of people and the problem of credit injustice, and further improve the development level of our country. Due to information asymmetry and poor business sustainability in the specific implementation of the financial inclusion, the problems of it can be effectively solved by combining with the technology of big data, block chain, cloud computing, artificial intelligence, virtual reality, augmented reality and mixed reality. This paper analyzes in detail the direction and strategy of financial science and technology to promote the development of financial inclusion, and contributes to the stable development of China's financial industry.

1. Introduction

With China's model of financial inclusion as a new financial model in the new period, financial inclusion can provide diversified and all-round financial services to every class and group in the social system. As an important guarantee of economic development, the degree of economic development depends entirely on the degree of financial development, which affect each other. China faces complicated actual situation and will continue for a period of time, like, the small-scale operation mode, low degree of industrialization, large proportion of poor people, production patterns with higher potential safety hazard and so on. However, the diversified and complicated economic model will produce relatively high cost amid financial services, which makes it hard for related policies for financial inclusion to carry out smoothly. Therefore, it is imperative to reform the existed financial model, in order to change the financial environment and improve the level of financial science and technology.

2. Main Difficulties for Financial Inclusion

2.1 Its Theoretical Basis: the Theory of Financial Exclusion and the Long-Tail

According to numerous practical investigation and research on the theory of financial inclusion model, it can be known that, in the traditional theory of Financial Exclusion, the financial industry is made according to the principle of minimizing the risk and maximizing the profit in the course of the choice of the service object. Such an option would inevitably automatically exclude a portion of people from providing with an effective financial service. These groups who are excluded from the scope of financial services have different characteristics in different countries and regions, mainly including micro-enterprises, farmers, disabled people, the elderly, women and so on. They have more typical characteristics of financial exclusion. The judgment of key service objects is generally carried out according to 28 law amid services provided by financial institutions. The so-called 28 law mainly refers to 20% of the high-end customer groups in which financial enterprises provide 80% of the interest groups through the main service objects, which is also the group that can bring the main interests to financial enterprises in the traditional financial industry. However, with the gradual deepening of the degree of social modernization in our country, the competitive state of the financial

market is gradually showing a trend of white-hot. The space that can be developed in the financial market dominated by the traditional 28-8 law has been seriously insufficient. If the financial industry does not expand its own existed business space and not diversify its own main sources of profits, it is bound to be eliminated in the fierce market competition because of the lack of competitiveness. At the same time, due to the financial theory of long-tail, the development of the financial enterprise is guaranteed to a certain degree. Compared with 20% of the top users, the emergence of long tail group can't bring great economic benefits to financial enterprises, but they can effectively make up for the shortcomings of insufficient economic benefits to a certain extent, due to their large amounts. That is to say, on the basis of ensuring and maintaining 20% of the top users, the low profit of long tail group who has scale advantage become another profit space that financial institutions should fully develop, which is also the inherent driving force for financial enterprises to carry out financial inclusion business. Therefore, how to develop the long tail group of financial enterprises and make them increase on the basis of stability are one of the severe tests that Chinese financial enterprises face in carrying out financial inclusion at present.

2.2 Information Asymmetry and Poor Business Sustainability

According to a large number of practical investigation and research on the long-tail group of financial enterprises, it can be found that in the process of expanding the long-tail group, the main test of financial inclusion services provided by financial enterprises is how to solve the problem of information asymmetry and ensure the sustainability of financial business. For example, taking agricultural households as an example, under the environment of small farmers' economic model in our country, the production and management mode of agricultural households is based on the family, with relatively small scale, thus, the amount of collateral that can be provided to the bank is limited with low value. It is generally biological products, such as agricultural and animal products. Because these kinds of products can't be effectively guaranteed the quality, the market risk of agricultural households is relatively large, which can't be effectively controlled. When the financial enterprise carries out the evaluation of performance, the credit level and the asset quality of the agricultural households, the real difficulty and the uncertainty of the financial enterprise are relatively large, leading to the difficulties in developing the financial inclusion model. Take the small and micro enterprises as an example, their management mode is lack of standard and their financial management has many potential safety risks. They don't have any valuable collateral, which leads to a low level of sustainable development. Many small and micro enterprises have reached a life-and-death edge. Therefore, it is inevitable that the financial enterprises have serious information asymmetry, in the face of the small and micro enterprises and the client groups such as the agricultural households, so that the moral risk factors facing the enterprises are relatively high, and the realization of the sustainable development goals of the enterprises is seriously affected. As a result, the information asymmetry and poor sustainable development ability of the financial enterprise has been a major obstacle to restrict China's development of the financial inclusion ^[1].

2.3 Other Factors

According to a large number of practical investigations and studies on financial inclusion carried out by financial machine enterprises, it can be found that information asymmetry and poor level of sustainable development are the main problems existed in the development of financial inclusion in China at present. Although it has been greatly improved under various effective measures, there are still many small problems, which makes it difficult to further improve the development level of financial inclusion in China. For example, China has released multiple policies of full subsidy, guarantee-fee, mortgage-free and accurate loan to relief poverty. The distribution target of financial subsidy is mainly concentrated on large quantity of poor household group, leading to sever information asymmetry, as there is a large difference in the conditions of the distribution object itself, and financial enterprises are hard to make accurate judgments on the distribution conditions with relatively large elasticity, resulting in the difficulties in effectively following up the process of every loan. In the process of loan recovery, the risk level that needs to be undertaken is also high, leading to more risk of loans to alleviate poverty at the objective level. With the introduction of agricultural

policy insurance, although the government has provided a large number of subsidies in premium, but because the ability of agricultural households to bear it is lower than the financial risk, and the market risk of small farmers' economic model in our country is relatively large, it is difficult to accurately evaluate the loss and income of agricultural economy. With the introduction of agricultural policy insurance, although the government has provided a large number of subsidies in premium, it is difficult to accurately evaluate the loss and income of agricultural economy, because the ability of agricultural households to bear is lower than the financial risk, and the market risk of small-scale peasant economy model is relatively large in China. Meanwhile, the high compensation rate of agricultural policy insurance, usually more than 100%, makes it difficult for insurance companies to ensure the continuous development of commercial savings. This is also an important financial service problem faced by small and micro enterprises in China ^[2].

3.The Development Direction and Strategy of Financial Inclusion Integrated with Financial Science and Technology

3.1Innovating Financial Products and Services and Focusing on the Difficulties of “Agriculture, Countryside and Farmers”

According to a large number of investigation and research on the development of financial inclusion, it can be found that the difficulties of “Agriculture, countryside and farmers” and small and micro enterprises should be drawn attention, so as to improve the effectiveness of financial inclusion model. According to the actual social demand, it is required to innovate the types and connects of financial inclusion products and improve the quality of financial services to a new level. Only in this way can the service level and quality of financial inclusion services be effectively improved. The main problems at the present for small and micro enterprises is the demand for financing amounts and reducing financing costs, while that for “the agriculture, the countryside and farmers” is convenient payment mode, insurance demand satisfaction and basic credit demand. Therefore, the ability of small and micro enterprises and "agriculture, rural and rural" enterprises themselves improve and meet the relevant requirements of the normal development of financial service. Meanwhile, financial enterprises can effectively use financial science and technology to carry out effective research and development of guarantee conditions and mortgage conditions, and make the requirements of financial services and products more relaxed. Through the effective means of financial science and technology, the ability of financial services to deal with management risks is effectively improved, and the service quality of financial inclusion is also progressed to a new level. At the same time, due to a relatively low level of financial knowledge and scientific and technological knowledge literacy of agricultural households, it should strengthen the research and development of financial service products. For example, biometric identification system is one of financial services products with high artificial intelligence technology, used to make loan, deposits, remittances, payments, insurance, which is simple to master, easy to understand and easy to operate.

3.2Supporting Small and Medium-sized Financial Institutions to Make Research and Application of Science and Technology

According to a large number of practical investigations and studies on the development of financial inclusion in China, it can be found that the internal motive force for making researches and development of science and technology is relatively strong, in view of the different development positioning of small and medium-sized financial enterprises and the constraints of market pattern, expanding the business related to inclusive finance and the transformation from small and medium-sized financial enterprises to large financial enterprises. For example, the business of the financial enterprises, such as the city business bank and the rural credit cooperatives, is mainly from the small and micro enterprise and the "the agriculture, the countryside and farmers" enterprises. However, because of the restriction of the ability of the small and medium-sized financial enterprises to develop financial products and the size of the assets, they have a clear disadvantage in the research and development and application of the financial science and technology, and their current state is

relatively backward. Therefore, in order to effectively change the present situation of small and medium-sized financial enterprises in China, it is necessary to provide a strong guarantee for the development of them through the joint efforts of government departments and regulatory departments, through the formulation of regulatory policies, fiscal preferential policies, technical assistance policies, talent security policies and many other means. In the process of the research and development of science and technology of finance, small and medium-sized financial enterprises need to pay attention to the firm implementation of the mode of two-leg walk, not only to strengthen the contact with the financial and technology enterprises but also to conduct close cooperation. It is also very important to adopt the power of external scientific and technological research, so as to make an effective remedy for the deficiency of the research ability of the science and technology. Small and medium-sized financial enterprises can cooperate with science and technology enterprises to set up joint laboratories. Moreover, it is necessary to strengthen the introduction of scientific research and technical personnel, cultivate the personnel with comprehensive literacy of scientific research within the enterprise, so that their ability of own training and research and development can be effectively improved, finally achieve the goal of self-sufficiency at the research and development level ^[4].

3.3 Play the Role of emerging Financial Service Providers

With the deepening of social informatization and Internet in our country, the financial industry combines the Internet technology and the information technology, which lays the foundation for the advent of the Internet financial era and the development of the financial science and technology era in our country. In this process, the emergence of various new financial service providers makes China's financial industry have the characteristics of diversification. In view of the era of Internet finance, the emerging financial service providers are based on the traditional financial industry and are working as an effectively supplement of the shortcomings of the traditional financial industry. As for the era of financial science and technology, the status of new financial service providers is gradually rising, which plays an important role for the development of the financial industry and has gradually become one of the core components of the financial industry. Meanwhile, the emerging financial service providers has become one of the indispensable suppliers of financial inclusion in China at present, owing to their strong competitive consciousness, innovation ability, research and development ability, few restrictive factors, small asset demand and centering on the long-tail group. Therefore, it is necessary to pay enough attention to the new financial service provider, so as to make it possible to take the advantages and functions of the traditional financial enterprise and make up the defects existing in the process of promoting the development of the financial inclusion in China. For example, MYbank launched by Tencent Company and WeBank launched by Alibaba company. The target users of the related credit products are mainly concentrated on wage earners and small and micro enterprises who have the demand for micro finance with low corresponding credit line. Their main marketing method is carried out through the Internet, which can effectively manage and control their own cost. Their financial product are with strong competitive ability in financial inclusion. According to the actual survey of the proportion of Tencent finance and Alipay finance in the third-party mobile payment market in 2018, the proportion of Tencent finance is about 39%, and that of Alipay at 54%, with a total of 93%. It can be seen that Alipay finance and Tencent finance occupy an absolute guiding position in the payment area of third party in our country through the investigation, with the advantages that other financial products can't surpass. Therefore, it is necessary to increase the support for Alipay finance and Tencent finance, expand its influential scope to the remote areas, effectively make up the shortcomings of the bank in this respect, and ensure further development of financial inclusion under the support of financial science and technology.

3.4 from the Aspect of Government

China has paid enough attention to the development of financial inclusion model in financial industry, which is relevant to the specific nation conditions of our country. For the further development of financial inclusion model, the relevant provisions of "Plan on Promoting the Development of Financial Inclusion" have been formulated. On this basis, various local governments have issued a large number of policies and measures to promote the development of financial inclusion, so that the

ability of financial inclusion in China has been essentially developed. After the implementation of some effective measures, the service quality of China's financial inclusion model has been effectively improved, especially for small and micro enterprises and agricultural households. They not only enhance their overall strength, but also further improve their economic benefits, which has been recognized and highly praised by the public. In the process of summing up the support policies of financial inclusion issued by local governments, it is found that the information asymmetry and the poor ability of sustainable development of financial enterprises are still important problems faced by financial inclusion. From the point of view of the government, to solve these problems can be solved by the following measures. Firstly, government should formulate some enhancement measures of government credit, such as financial discount policy, guarantee policy and so on, so as to enhance the qualification of small and micro enterprises and agricultural households to obtain services from financial enterprises, and lower the cost of obtaining financial qualifications. Secondly, Governments should consider the characteristics of local development, carry out the evaluation of the good faith enterprises, namely, the evaluation of the good faith enterprises, the three-letter assessment activities, the trust users, the credit villages and the credit towns, and establish the information platform and the credit reporting platform in combination with the Internet technology, so as to standardize the operation behavior of the enterprises to a certain extent. The ability to obtain the information of the financial enterprise is effectively improved, and the phenomenon that the information of the financial enterprise is not symmetrical is reduced to the greatest extent. Thirdly, in terms of tax policy, government formulates a large number of preferences, incentives to trigger the financial industry. In this way, the sustainable development of financial inclusion model of financial enterprises can be made up, so as to effectively enhance the enthusiasm of financial institutions to carry out financial inclusion model, and to promote the development of financial inclusion driven by financial science and technology ^[6].

4. Conclusion

In a word, according to the above systematic research on the direction and strategy of promoting the development of financial inclusion by financial science and technology, it can be seen that the beneficiary area of financial inclusion services will be gradually expanded, under the guidance of equal financial science and technology, and the financial inclusion effect enjoyed by people will be gradually improve, on the basis of the innovation of financial model. The long-term development of inclusive finance is based on the direction of financial science and technology, and the key to the long-term role of financial inclusion is focused on the key direction guided by financial science and technology. On the basis of ensuring the long-term development of financial inclusion, the role of government agencies and financial institutions can be played to effectively avoid all kinds of financial risks, and further promote China's overall economic development.

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