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The Impact of China's Digital Finance on the Financial Industry and Enterprises and Its Future Development

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Abstract: As a new product formed by traditional finance through the empowerment of technology, digital finance has a significant impact on the financial industry and enterprises. China's digital finance has achieved a leading position in terms of development level and popularity worldwide. Over the past decade, the ecosystem of digital finance has gradually grown and formed in China, and integrated into the traditional financial system, profoundly changing China's original financial landscape. In this regard, this paper first starts from the impact of China's digital finance on the traditional financial system, specifically analyzing the challenges it poses to payment and settlement structures, information matching methods, and data advantages. Secondly, this paper explores the impact of digital finance on commercial banks and general enterprises. Finally, this paper briefly discusses the future development of digital finance in China. The development of China's digital finance reflects the regularities that exist in the process of digital finance development which has certain enlightening significance for the development and improvement of digital finance system around the world.

Keywords: Digital Finance, Traditional Finance, Blockchain

1. Introduction

Digital finance, a product of the combination of finance and technology, broadly refers to traditional financial institutions, internet companies, government agencies, and others using digital technologies such as big data, artificial intelligence, and blockchain to realize financing, payments, investments, and other new financial business models. After more than a decade of development, China's digital finance involves almost all of China's financial business and has become an indispensable part of the financial system. New features, functions and applications of digital finance are emerging, showing the infinite possibilities of future finance.

Most scholars regard the listing of Yu'E bao in 2013 as the first year of China's digital financial. After just over a decade, the scale of China's third-party payments, online lending, digital insurance, and digital currencies is already far ahead of the rest in the international arena. In China, new digital financial institutions have caused some impact on the traditional financial industry, accelerated the overall digitization of the financial industry, improved the service efficiency and quality of financial institutions, and promoted the innovation of financial business. Inclusive finance is an important application direction of China's digital finance.The rapid development of digital finance in China and

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its significant role in inclusive finance are closely related to the tacit consent and even support from regulatory authorities. Many Chinese enterprises have indeed benefited in their production and operations as a result of digital finance. This paper aims to analyze the impact of China's digital finance on the traditional financial system and enterprises, thereby deepening our understanding of digital finance in China.

2. Impact of China's Digital Finance on the Traditional Financial System

2.1. Challenges to Traditional Payment and Settlement

The payment channel and the sales channel of financial products are the two major channel businesses of traditional banks, but the development of digital finance has changed the channel structure of traditional finance. Before the emergence of Alipay and WeChat Pay, consumers directly through the banking channel to achieve the payment of funds and the purchase of financial products. When the Internet third-party payment channel became the mainstream payment channel, consumers directly face the third-party payment software, the bank became the back office of the third-party payment, only responsible for settlement and clearing work. Internet payment tools thus moved to the front end of the payment channel, shielding the direct connection between traditional banks and consumers. The payment channel can carry out data collection, thus understanding the consumer's transaction habits and information. On this basis, Internet payment channels can then provide more financial services, while banks will lose many data resources and customer resources.

In addition, third-party payment channels can accumulate small amounts of consumers' idle funds and integrate these funds to provide more financial services. For example, Balance Treasure aggregates small funds idle in third-party payment channels and passes them to fund companies to focus on purchasing fund products, which improves the rate of return on customers' funds and enhance the stickiness of third-party payments for funds. Cao Fengqi [1]pointed out that compared with traditional offline financial channels, Internet financial channels have a greater advantage in the aggregation of funds, both in terms of cost and volume. With the development of Alipay and WeChat Pay, Chinese consumers are using less and less cash, which reduces their reliance on traditional offline financial channels. This further weakens the advantage of traditional banks in physical branches, and offline financial channels will shrink accordingly.

In the course of development of Internet third-party payments in China, the structure of traditional financial clearing and transfer has also changed. China UnionPay has always had a monopoly in the market as the transfer and clearing organization between different banks. Consumers using Alipay have accounts with different banks, so transactions between them need to be transferred and cleared, a job that should have been done under the framework of the traditional UnionPay system. However, in the early stages of Alipay's development, UnionPay did not accept Alipay. Alipay thus had to negotiate with hundreds of banks to achieve the direct connection between Alipay and banks. This invariably makes Alipay with the traditional UnionPay in the transfer, clearing functions, challenging the UnionPay's market position. Subsequently developed third-party payments also mostly bypassed the UnionPay direct connection with banks. Along with the development of third-party payments, mainly WeChat Pay and Alipay, a large amount of data on consumer transactions and clearing is dispersed among various third-party payment institutions, and the direct-connection model bypasses the central bank's clearing system, making it impossible for banks and the central bank to get hold of specific transaction information and the accurate flow of funds, which has brought about great difficulties in the work of anti-money laundering, financial supervision, monetary policy regulation, and financial data analysis. In order to strengthen supervision, in 2017, the Clearing Centre of the Central Bank of China organized the establishment of NetsUnion Clearing Corporation (NUCC), whose main function is to build a common transfer and clearing platform for non-banking third-party

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payment institutions such as Alipay and Wechat Pay. All third-party payment institutions are required to cancel their direct connection with banks and achieve transfer and clearing through NUCC. As a result, China's financial system has formed two transfer and clearing organizations, with UnionPay responsible for traditional offline inter-bank fund clearing, and NUCC responsible for the transfer and clearing of network payments by non-bank payment institutions.

2.2. Challenges to Traditional Information Matching Methods

One of the key functions of the financial industry is the financing of funds, which involves the business of lending and borrowing. Financial institutions needs to match funds between borrowers and lenders based on factors such as the amount of funds, interest rates, loan terms and risks. In this process, financial institutions act as a matchmaker of lending and borrowing information, earning profits through interest rate spreads and service fees. However, P2P can directly connect the borrowing and lending needs between a large number of individuals together with low cost and high efficiency, which is hard for traditional financial models to achieve. Therefore, the development of P2P effectively promotes the symmetry of financial information, reduces the cost of financing, and facilitates the development of inclusive finance. Similarly, Internet crowdfunding is a financial innovation that makes use of the advantages of information technology in matching supply and demand information. Project financiers release project information through Internet platforms, raise funds from numerous small and medium-sized investors, and give investors returns in terms of equity, interest or products. Therefore, digital finance has transformed the traditional way of matching financial information, reduced the cost of borrowers and lenders, and improved the efficiency of the financial industry. Wu Xiaoqiu [2] believes that the development of digital finance has also accelerated the process of traditional financial disintermediation.

2.3. Challenges to the Data Advantage of Traditional Finance Industry

The financial industry is essentially about risk and credit, and the assessment of risk and credit heavily relies on data. Similarly, Internet companies operate on data. Many Internet companies are information service enterprises, they are information mediums or information intermediaries, and they have mastered a large amount of consumer data by providing internet transaction, social, search and other services, and these data resources make it very easy for internet companies to establish their own assessment system of risk and credit, so as to enter the financial industry. For example, e-commerce companies in China use the transaction data they have to provide small loans for enterprises and credit consumption for consumers, and these financial services are based on the big data resources they possess. Moreover, the financial industry and Internet companies hold different types of data. Banks obtain user information from offline shops, and they have more consumer asset data; while Internet companies obtain consumer transaction data and behavioral data through the Internet. With the gradual migration of offline transactions to online transactions, as well as the increase in the time consumers spend on the Internet, Internet companies will have access to more consumer data resources, gradually eroding the data advantage of traditional finance.

3. Impact of China's Digital Finance on Businesses

Among businesses, financial institutions and non-financial enterprises are influenced differently by digital finance. Among financial institutions, commercial banks are both the most impacted and representative entities. This paper will provide a detailed analysis of the specific effects of digital finance on commercial banks and non-financial enterprises.

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3.1. Impact on Commercial Banks

On the one hand, the development of digital finance has brought great competitive pressure to traditional commercial banks in China. However, according to Liu Lanbiao et al. [3]existing research suggests that digital finance has a limited substitution effect on traditional financial intermediaries, and there exists substantial room for integration between the two. Traditional banks have gained momentum and opportunities for efficiency improvement in the wave of digital finance. Shen Yue and Guo Pin [4] find that there are technological spillover effects of digital finance in China, and its development will significantly increase the total factor productivity of commercial banks.

On the other hand, in the face of the competitive impact of digital finance, commercial banks may gain higher profits by increasing their own risk-taking behaviour. The development of Internet financial products such as Yu'E Bao has intensified the degree of competition in bank deposits, and banks may respond to the competition by, for example, raising deposit rates. Dai Guoqiang and Fang Pengfei [5]point out that digital finance pushes up the cost of banks' liabilities, which leads to an increase in the interest rate on bank loans, causing loan applicants to prefer riskier assets with higher rates of return and increasing bank risk. Liu Zhonglu [6]argues that there is heterogeneity in the impact of digital financial development on the risk-taking behaviors of different types of commercial banks: risk-taking behaviors of joint-stock commercial banks decrease, but risk-taking behaviors of urban commercial banks, rural commercial banks and large commercial banks increase.

3.2. Impact on Non-financial Enterprises

3.2.1. Alleviating Financing Constraints

Firstly, the development of digital finance has broadened the sources of capital and increased the volume of financing. There are a large number of dispersed small-scale investors in the financial market, and the traditional financial market, due to costs and technology, is unable to efficiently absorb these investors, thus causing a certain degree of inefficiency. However, digital finance, leveraging its advantages in terms of scenarios and services, fills in the gaps of traditional financial services, reduces the barriers and costs of financial services, and be able to reach a wider range of tail groups, integrating them into the funding sources for enterprise financing.

Secondly, digital finance enhances the information collection ability of finance as an intermediary and reduces the degree of information asymmetry. Love [7] finds that reducing the degree of information asymmetry can reduce the constraints of enterprise financing through analyzing the data of more than 40 countries and regions. Digital finance can also rely on information technology to achieve the capture of behavioral data of different industries, enterprises and individuals, effectively integrate the data, establish a reliable third-party credit system, provide investors with more information about the investment and financing decisions of enterprises, and alleviate the financing constraints for high-quality enterprises.

Furthermore, digital finance can effectively supervise the use and allocation of internal funds within enterprises using digital technology, promote post-event information communication and effective supervision, and reduce the risk of debt due to the failure of external capital markets and imbalances in internal capital allocation, thereby alleviating financing constraints for enterprises.

Finally, digital finance can provide enterprises with a richer level of financing channels and methods, such as intelligent investment, supply chain finance, consumer finance and so on.

Wan Jiayu et al. [8]empirically examined the impact of digital finance on corporate financing constraints using Peking University's digital inclusive financial 2011-2018 municipal data and data from Chinese listed companies. This study found that the development of digital finance significantly alleviates corporate financing constraints.

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3.2.2. Promoting Technological Innovation

Digital Finance Facilitates Enterprise Technological Innovation through two pathways. Firstly, it provides additional funding sources for technological innovation in enterprises, similar to alleviating financing constraints. Secondly, the development of digital finance provides high-quality technological tools for information technology analysis in enterprises, helping them identify the optimal path for technological innovation succession and making rational and effective production and technological innovation decisions.

Tang Song et al. [9] empirically tested the impact of digital finance on enterprise technological innovation based on the data of A-share listed companies from 2011 to 2017, and found that the development of digital finance has a significant supportive effect on enterprise technological innovation. Xie Xueyan and Zhu Xiaoyang [10]studied the impact of digital finance on the technological innovation of small and medium-sized enterprises using the data of New Third Board listed enterprises from 2011-2018, and found that the development of digital finance significantly promotes the technological innovation of those enterprises.

3.2.3. Enabling Digital Transformation in Enterprises

Digital finance plays an important role in promoting China's enterprises to achieve digital transformation. Gao Shuang [11] points out that digital finance helps enterprises achieve digital transformation by providing solution support, financing help, data protection, organizational management and talent training services.

4. Conclusion

China’s digital finance has achieved a leading position globally in terms of its development level and widespread adoption. Over the past decade, digital finance has gradually grown in China, integrating into the traditional financial system and profoundly reshaping the financial landscape. This article first analyzes the impact of Chinese digital finance on the traditional financial system, highlighting the challenges it poses to traditional payment and settlement structures, information matching methods, and data advantages. Additionally, the specific roles of digital finance for commercial banks and general enterprises are explored. For commercial banks, digital finance brings increased competitive pressure and drives the adoption of risk-bearing behaviors. For general enterprises, digital finance can help alleviate financing constraints, promote innovation, and facilitate digital transformation. Finally, this article provides a brief forecast of the future development of China’s digital finance: by embracing disruptive technologies such as blockchain, digital finance will continue to integrate into traditional finance after undergoing localization, legalization, and compliance transformations, leading to transformative changes and improvements in the traditional financial sector.

References

[1] *Fengqi C. (2015) ‘Challenges of Internet Finance to Traditional Finance’, Finance Forum, 01(1), pp. 3–6+65. doi:10.16529/j.cnki.11-4613/f.2015.01.002. (Chinese)*

[2] *Xiaoqiu W. (2015) ‘Growth Logic of Internet Finance’, Finance and Trade Economics, 02(1), pp. 5–15. doi:10.19795/j.cnki.cn11-1166/f.2015.02.001. (Chinese)*

[3] *Lanbiao L. et al. (2013) ‘Exploring the Development of Internet Finance and Its Impacts on Traditional Financial Models’, Economic Perspectives, 08(1), pp. 73–83. (Chinese)*

[4] *Yue S. and Pin G. (2015) ‘Impacts of Internet Finance and Technological Spillover on Total Factor Productivity of Commercial Banks’, Journal of Financial Research, 03(1), pp. 160–175. (Chinese)*

DOI: 10.54254/2754-1169/100/20240692

[5] *Guoqiang D. and Pengfei F. (2014) 'Interest Rate Liberalization and Banking Risk: A Study Based on the Perspectives of Shadow Banking and Internet Finance', Finance Forum, 08(1), pp. 13–19+74. doi:10.16529/j.cnki.11-4613/f.2014.08.009. (Chinese)*

[6] *Zhonglu L. (2016) 'A Study on the Impact of Internet Finance on Banking Risk-Taking of Commercial Banks', Finance and Trade Economics, 04(1), pp. 71–85+115. doi:10.19795/j.cnki.cn11-1166/f.2016.04.007. (Chinese)*

[7] *Love, I. (2003) 'Financial development and financing constraints: International evidence from the Structural Investment Model', Review of Financial Studies, 16(3), pp. 765–791. doi:10.1093/rfs/hhg013.*

[8] *Jiayu W. et al. (2020) 'Digital Finance, Financing Constraints, and Firm Innovation', China Economic Review, 01(1), pp. 71–83. doi:10.19361/j.er.2020.01.05. (Chinese)*

[9] *Song T. et al. (2020) 'Digital Finance and Firm Technological Innovation: Structural Characteristics, Mechanism Identification, and Differential Effects under Financial Regulation', Management World, 05(1), pp. 52–66+9. doi:10.19744/j.cnki.11-1235/f.2020.0069. (Chinese)*

[10] *Xueyan X. and Xiaoyang Z. (2021) 'Digital Finance and Technological Innovation in Small and Medium Enterprises: Evidence from the New Third Board Companies', Studies of International Finance, 01(1), pp. 87–96. doi:10.16475/j.cnki.1006-1029.2021.01.009. (Chinese)*

[11] *Shuang G. (2023) 'Digital Finance Facilitates China's Corporate Digital Transformation', Commercial Economics, 12(1), pp. 4–6. doi:10.19905/j.cnki.syjj1982.2023.12.045. (Chinese)*