

The Integration and Conflict Between Digital Finance and Traditional Monetary System

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Abstract. The wave of digitization is sweeping the world. The financial industry has also entered the process of digitization. The combination of both produces digital finance and derives many digital financial products such as Bitcoin, Digital RMB and so on. The products are constantly breaking through the disadvantages of the traditional monetary system and bringing new vigor to the traditional monetary system. Digital finance has deeply integrated with the payment, cross-border settlement, and reserve of the traditional monetary system. It brings a lot of innovative features. At the same time, due to the rapid development of digital technology, the relevant supporting measures and practitioners' literacy have appeared as unsuitable phenomena and problems in macro-monetary policy regulation, information leakage, and legal supervision. And giving corresponding suggestions on related issues, this paper aims to do profound research and analysis by providing examples, which is to explore the integration path and conflict coordination between digital finance and traditional monetary system and to provide reference value for the benign development of digital finance.

Keywords: Digital finance, integration and conflict, traditional monetary system, traditional finance industry.

1. Introduction

With the digital wave in the 21st century, digital application technologies such as the Internet, big data, blockchain, and artificial intelligence continue to develop, which not only reshapes people's lifestyles but also has a profound impact on the traditional monetary system. Digital finance is a product of this era, and it has gradually become a new blaze in China's financial field since president Xi emphasized the core construction of a powerful digital and network country in the 18th National Congress of the Communist Party of China [1]. At the macro level, the digital currency that is produced by digital finance has the characteristic of decentralization, which weakens the traditional monetary policy effectiveness in regulating and controlling the money supply and interest rates in the market. This makes it difficult for monetary policy makers to accurately implement regulation and control and the demand for the market analysis ability of policy makers is getting higher and higher; At the micro level, this integration uses digital technology to optimize the financial services process and normal life experience. It changes the traditional way of payment and settlement and realizes point-to-point real-time transactions, which reduces transaction costs and improves payment efficiency, but it still challenges the role of traditional financial institutions in the field of payment and settlement. Individuals and enterprises can conduct financial transactions more easily. It is reducing their dependence on intermediaries. So the financial intermediaries business will shrink. At the same time, it also makes it easier for consumers to pay and reduce their dependence on the use of cash. These changes have brought unprecedented efficiency and crisis to financial consumers and industry practitioners, as well as extreme convenience for ordinary consumers. The rise of digital finance has not only changed the way that financial business operates, but also challenged the traditional monetary system. The traditional monetary system is unable to cope with the decentralization, real-time, and other characteristics brought by digital finance. At the same time, the rapid development of digital finance has also exposed many risks and challenges, such as data security, suitable monetary policy, effective legal supervision, etc. How to understand the integration and conflict between digital finance and the traditional monetary system, how to grasp the digital finance

development trend, and how to deal with the risks and challenges it brings have become important research issues for us. This article describes the digital money products that are brought by digital finance analyzes the integration and conflict of digital finance to the traditional monetary system in some main aspects and puts forward relevant suggestions. Let the public have a deeper understanding in the current situation of the digital financial development and also provide a reference price for relevant policy makers.

2. Organization of the TextDigital Finance Wave: Derivates and Innovatory Feature

Digital finance is a new generation of financial services, which skillfully combines the Internet and information technology with traditional financial services. It covers Internet finance, mobile payment, online banking, and other service forms. Its derivatives market is becoming more and more rich by the rapid development of digital finance. A digital wallet is a kind of application that securely stores, sends, and receives digital currency. The digital wallet provides users with a convenient digital currency management experience as well as digital payment usage. Then Bitcoin and Ethernet Square are capable of ensuring the security and anonymity of transactions in account of the relevant encryption technology, which contributes to an important part of the digital finance field. In addition, stable currency that as a digital currency linked to stable assets has attracted a large number of attention from investors because of its relatively stable price. The rise of decentralized finance (DeFi) has also brought new opportunities for the digital financial derivatives market. A variety of DeFi derivatives, such as tokens in decentralized exchanges and loan tokens in loan agreements, continue to emerge. These digital financial derivatives provide investors with more investment options and risk management tools but also bring higher investment risks and complex operations.

Digital finance represents the digital process of the financial industry driven by the new generation of information technology and leads the digital transformation in various fields. It combines big data analysis, blockchain technology, and artificial intelligence to create a large number of new financial products and services to achieve online, real-time, and personalized financial services, which promotes the financial data interconnection and shows the financial ecology by the open model. At the same time, the digital finance development focus has gradually shifted to the financial technology industry, which has further enhanced the close integration of financial services and the real economy through the application of financial technology. It has had a positive impact on the economic development of the country.

3. The Traditional Monetary System's Soild Foundation and Challenge of the Times

The structure and operation mechanism of the traditional monetary system mainly revolves around the central bank, commercial banks, and other financial institutions, which is a relatively stable financial network. The central bank is responsible for issuing money, formulating monetary policy, and regulating the money supply in the market using adjusting the deposit reserve ratio and open market operation to affect economic indicators such as interest rate and inflation rate. As the currency circulation main channel, commercial banks interact with the public through deposit and loan business, foreign exchange, and other businesses to realize money circulation. Under the existing social system of law, the traditional monetary system has strong legal protection reliability and significant advantages in convertibility on the exchange rate market. It provides the public with a stable monetary environment and convenient financial services.

However, the traditional monetary system also has some drawbacks. Centralization gives the central bank absolute power in money supply and monetary policy, which leads to a lack of sufficient transparency in transactions in the traditional monetary system. It may lead to the risk of abusing power and decision-making mistakes as well as corruption and affect the financial ecology. The

traditional currency transaction efficiency is relatively low because the process needs to be completed through many components. It limits the rapid development of the financial market to a certain extent. Especially in cross-border payment, the traditional monetary system involves multiple banks, payment systems, and currency exchange links, which result in high payment costs and affect international trade and investment development. Although the traditional monetary system has advantages in stability, legal protection, and convertibility, its centralization and low transaction efficiency still need to be paid attention to. With the development of science and technology, the emergence of digital money and other new forms of money may bring changes to the financial system, solve the problems that exist in the traditional monetary system, and optimize the financial ecological environment.

4. The Intersection of Digital Finance and Traditional Monetary System.

4.1. Payment Aspect

By the popularity of digital payment methods such as mobile payment and code-scanning payment, the traditional monetary system is gradually integrated into digital financial derivatives, and cash payment is gradually replaced. Now digital payment has a considerable market scale in China. It is shown in Figure 1.

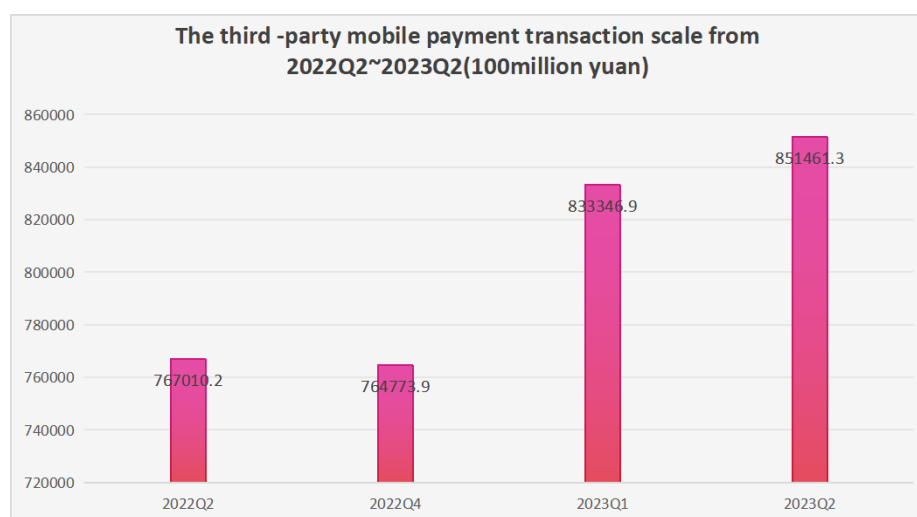


Figure 1. The third-party mobile payment transaction scale from 2002Q2~2023Q2 (Data resource: CSMAR)

The figure shows that China's third-party mobile payment market has reached 86.01 trillion in the third quarter of 2023, an increase of 1.02% month-on-month, and the digital mobile payment market still has a good growth trend. This kind of digital mobile payment has realized the diverse payment methods. Digital mobile payment customers have achieved great improvement in passivity, lag and cognitive aspects, which makes the concept of financial digitalization more popular. At the same time, the expansion of the digital payment market has promoted digital financial product improvement and the widespread using digital financial derivatives has further stimulated the financial digitization process. It has realized the two-way significance of improving customer life experience and digitalization of the financial industry [2].

4.2. Cross-border Settlement Aspect

Under the tide of financial digitization, digital financial products enter the cross-border payment market in the traditional monetary system and produce an integration effect. Cross-border payments under the traditional monetary system rely on the traditional banking system and payment networks such as Society for Worldwide Interbank Financial Telecommunication (SWIFT). Its whole process is that the domestic remitter sends instructions to the paying bank using the central bank's RMB cross-

border payment system (CIPS). Then the paying bank generates a MT103 message according to the standard and sends it to the agent bank through the SWIFT system. The acting bank is responsible for message parsing, checking and preliminary bookkeeping, after that sending the message toward the receiving bank. The receiving bank will check the message again, and then book the account and notify the payee.

This involves a number of intermediaries and clearing processes, resulting in high cross-border settlement costs and low settlement efficiency. Besides, settlement time is also affected by working days and jet lag. Therefore, the cross-border payment under the traditional monetary system has considerable stability, but its comprehensive operational efficiency and cost are still insufficient. Digital financial products aim at the demand in the market and enter the market in time. It exerts the efficiency of digital finance to integrate the traditional currency cross-border settlement system stability. Digital finance uses blockchain technology to reduce intermediary taches and realize the real-time settlement mode of 24 hours a day, as well as create special cross-border payment platforms such as Ripple and Stellar, which greatly reduce the time and capital cost of cross-border settlement and improve significantly the settlement efficiency in extent that approach to immediate liquidation [3].

4.3. Store Aspect

Reserve integration is a deeper combination of digital finance and traditional monetary system. It involves security and monetary system stability and is also an important pillar of financial stability. The store in the traditional monetary system mainly exist by gold and foreign exchange form while digital finance provides new possibilities and choices for currency reserves. Facing the integration of digital finance and the traditional digital monetary system, the central bank has launched the digital RMB, a legal currency, which has the same legal status and value as the traditional RMB. This means that digital RMB can be included in the national foreign exchange reserves and become national reserve assets. This digital endowment of RMB can accelerate RMB internationalization and enhance the reserve status. At the same time, the digital RMB brings innovative ideas to the reserve management in the traditional monetary system which mainly depends on physical storage and account records the digital RMB can use blockchain technology to achieve distributed bookkeeping and transparent management. This innovative management mode can improve the flow and traceability of reserve assets reduce management costs and control risks to a certain extent. By the end of 2022, the stock of digital RMB in the market has reached 13.61 billion yuan, indicating that the reserve of digital RMB has a good scale now. According to the data report recently released by the People's Bank of China, the digital RMB brought into circulation in M0, the total amount of M0 in China reached 10.47 trillion yuan in 2022, an increase of 15.3% over the previous year. This shows that the integration of digital finance and traditional digital currency not only plays a diversified role in the reserve link, but also has been recognized in the field of circulation. This further promotes the recognition of digital RMB as the storage value.

5. The Game and Synergy between Digital Finance and the Traditional Monetary System

As an emerging financial ecology, digital finance develops rapidly with in-depth integration with digital science and technology. However, Marxist philosophy tells us that everything has two sides, especially new things. Digital finance is a new financial ecology, which will certainly bring problems to the financial ecology under the traditional monetary system, such as financial risk control, pseudoscience brought by digital neutrality, and so on. These are normal financial phenomena [4]. the essential reason is that the differences in structure, technology, and operation mode between digital finance and traditional monetary systems make the operators in traditional monetary systems unadaptable. To ensure the healthy develop digital financial ecology, it is necessary to update the

financial format management system under the traditional monetary system to make it have a virtuous circle with the digital financial ecology development.

Under the traditional monetary system, the state mainly controls the market interest rate by manipulating the money supply, which in turn affects the investment behavior and consumption demand, so the key point is the money supply. But now digital finance produces more and more digital money and integrates it into the traditional bank operation system. It makes it more difficult for the central bank to macro-control the money supply. For example, the investment scale of Internet finance Yu'e Bao has reached the trillion level by 2023, but in the level of money circulation, these currencies are at the level of M0, however. Their flows will no longer have an impact on M1 and M2 levels. And how do we judge whether Yu'e Bao's currency is property or cash? the key difficulty is that Yu'e Bao has the ability to convert the two in real time [5]. This shows that the central bank's ability to accurately regulate and control the traditional currency system has been weakened in the context of digital finance rapid development and the monetary theory in the traditional monetary system will also be challenged. We know that the key point of the market is the price mechanism, so to better adjust the market, monetary policy tools can change from "quantitative" to "price". There are two reasons: first, the price in the actual digital finance is more flexible than the quantity adjustment and adapts to the changes in the digital financial market. Second, adjusting the price in digital financial activities, which adjusts the interest rate, will help to reduce the transmission link and time of monetary policy along with alleviating the lag problem. It provides macro-control support for the healthy development of the digital financial market.

Digital finance not only affects the policy decisions in the traditional monetary system but also poses a threat to financial ecological security. After the barbaric growth of digital finance, the relevant platforms collect a large amount of financial customer information which belongs to highly sensitive information. Compared with the financial industry, the subject of digital financial platforms is more personal. The overall practitioner's quality in their industries is lower than that of participants in traditional financial institutions, which increases the risk of personal information disclosure [6]. Because the service correlation dimension of digital finance is larger than that of traditional financial institutions, the original separate supervision and management system is not suitable for the digital finance management. The application of blockchain technology in digital finance has produced a large number of encrypted and decentralized financial products. It leaves an incomplete traceable trail on related transactions. This makes the original traditional monetary system laws and regulations with relevant norms blank by the background of the rapid development in digital finance, which is easy to produce grey areas and illegal arbitrage as well as leads to systemic financial risks. The problems may lead to "black crane" and "gray rhino" events. For this kind of derivative phenomenon, China should increase the digital financial talents construction, because "talents are an important indicator of a country's comprehensive national power." Talents are the key to independent innovation and top talents are irreplaceable. "About the digital financial talents construction, it is necessary to strengthen the stock, increase increments, and activate quality to enable relevant practitioners to do practical work and strengthen the construction of digital financial ethics as well as effectively reduce the risk in breeding personal information disclosure [7]. Relevant supporting legal provisions are also urgently needed to fill the gap in legal supervision. Meanwhile, doing reliable evaluation of digital financial products, and effectively protecting the rights and interests of digital financial products customers.

6. Conclusion

The wave of digitization has quietly swept the world and it has spread to the financial field now. The financial industry has been deeply integrated with digital technology. Thus it creates a large number of digital financial products. Related digital financial products are integrated with the traditional monetary system in terms of payment, cross-border settlement, and reserves. These related digital financial products have brought many new features, such as de-centralization, high efficiency,

and convenience. This brings new opportunities and vitality to the financial industry and produces new reforms to the traditional financial industry. Likewise, it provides more diversified financial services and meets the market need. However, there are many problems in the process of integration because digital finance is different from the traditional monetary system in many aspects, which causes the original application ecology not in line with the development of emerging things. So there is an urgent need to do a good job in "new infrastructure" in related fields to standardize digital finance development and also limit the spread of grey areas.

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