

Research on China's Financial Supervision Based on Digital Currency

Yiqing Liao

South China Agricultural University, Guangzhou 510642, China.

Abstract: The development of digital technology in China is not yet mature, and the issuance of digital currency has the risk of information technology, systematic risk and currency circulation, which has brought challenges to China's financial supervision. It is necessary to vigorously develop financial technology, innovate supervision mode, strengthen international supervision cooperation, promote the promotion and development of digital currency and maintain financial stability.

Keywords: Digital Currency; Risk; Regulation

1. Definition of digital currency

At present, there is no uniform explanation for the definition of digital currency in the world. Popular science China defines digital currency as an unregulated, digital currency, which is usually issued and managed by developers and accepted and used by members of specific virtual communities. EBA defines virtual currency (digital currency) as a digital representation of value. It is not issued by the central bank or the authorities, nor is it linked to the French currency. However, it is accepted by the public, so it can be used as a means of payment, or transferred, stored or traded in electronic form. The bank for International Settlements defines digital currency as a form of data to express its own value meaning. It exchanges data to carry out daily transaction circulation, value unit and value storage. It is a kind of electronic currency which is different from the traditional electronic currency.

Digital currency is divided into private digital currency and legal digital currency. Private digital currency is dominated by private individuals or companies. It mainly refers to a currency based on node network and digital encryption algorithm created, issued and circulated by cryptographic technology. It needs blockchain technology to prove transaction records. It has the characteristics of anonymity, globality, fixed total amount and decentralization. There are some existing types, such as bitcoin, Ethereum, dogecoin, etc. Legal digital currency refers to the legal tender issued by the central bank in the form of encrypted digital string representing specific amount. It is neither a physical entity nor a physical entity. However, it is characterized by low amount of investment, convenience, fixed amount, fixed cost, fixed value and so on.

2. Risks of digital currency

2.1 It risk

The risk of being unable to estimate the level of technology available is the risk. Digital currency uses blockchain technology, and its distribution, circulation and withdrawal all rely on Distributed Accounting Technology. Blockchain is based on the application of open source software, P2P network and hash function, so it has many excellent characteristics, such as decentralization, distributed accounting, destruct, traceable, tamper proof, data security, etc. However, it is also because the blockchain has the characteristics of decentralization and distrust, and the development of digital technology in China is not yet fully mature, the technical standards are different, and the scalability is poor. If these asymmetric encryption digital signature algorithms for identity authentication and account identity information protection and hash algorithm for consensus mechanism are cracked, it may cause identity fraud, personal information disclosure, property loss and other risks. From the perspective of current technological development, new technologies such as cryptography, artificial intelligence and quantum computing are being developed and applied in depth. The encryption

algorithm will be difficult to crack, and the risk of illegal acquisition of digital currency and disclosure of personal privacy will increase.

2.2 Systemic risk

Systemic risk refers to the significant impact on the financial system caused by internal or external adverse factors which have not been found or valued for a long time in the development process of digital currency. If a large number of digital currencies are issued, people will store the money in their electronic devices. Once the entry-exit and foreign currency exchange is involved, it will increase the difficulty of supervision. A small amount of digital currency will cause speculation, especially the intervention of international speculators, which will lead to financial instability. Digital currency is separated from the jurisdiction of traditional financial system, facilitating cross-border capital flow, and foreign capital is easier to enter the domestic market, and these cross-border capital do not go through bank clearing and settlement, leading to the rise of systemic risk.

2.3 Currency circulation risk

Digital currency circulation is closely related to Internet infrastructure and telecom operators, which may subvert the traditional financial model and bring new challenges to digital currency circulation. The development of the eastern coastal areas and the central and western regions of China is unbalanced, and the development of urban and rural areas is unbalanced. As a result, the distribution of Internet infrastructure and telecom operators is unbalanced. Although smart phones have been popularized in China, there are still many middle-aged and elderly people and children who will not use smart phones. Moreover, the infrastructure construction in some poor areas is not perfect, and the popularity rate of smart terminals is low, which seriously affects the promotion of digital currency. In the process of using digital currency, these digital currency scenarios are needed to prevent the loss of digital currency and the risk of stolen digital currency applications. According to the recent network consumption data, in order to ensure the safe and stable circulation of digital currency, we need to have super strong data operation ability. The high-precision and high-strength processing ability brings severe challenges to the digital currency trading system.

3. The influence of digital monetary supervision on China

Internet financial supervision refers to the formulation of legal rules on the legal risks, operational risks, infection risks, reputation risks, liquidity risks, credit risks and market risks of Internet finance, and the adoption of targeted measures to strengthen and improve supervision, so as to realize the sustainable development of Internet finance and protect the interests of Internet financial consumers.

At present, China's current Internet financial management system is "one line and three meetings" (i.e. People's Bank of China, China Banking Regulatory Commission, China Securities Regulatory Commission and China Insurance Regulatory Commission), which determines the specific supervision objects according to the types of financial institutions, and takes the establishment of examination and approval institutions, examination of business compliance and qualification of employees as the specific supervision forms. However, the supervision form of "one line, three meetings" has some problems, such as difficult concentration of supervision information, scattered supervision ability, overlapping supervision and absence of supervision, resulting in the waste of financial supervision resources.

At present, the circulation of digital currency in China is digital RMB. This paper explores the influence of digital currency on China's financial supervision, that is, the influence of digital RMB on China's financial supervision. Therefore, the following is based on the influence of digital RMB on financial supervision and suggestions.

3.1 Increased transparency of capital flows

The use of digital currency blockchain technology has the characteristics of distributed bookkeeping, de-trust, traceability and non-tampering, and the capital flow of both parties can be traced back to the source. These characteristics are not available in the paper money stage. Blockchain technology enables financial supervision departments to grasp the flow of large amounts of funds, so as to detect the use of these funds, reduce the possibility of financial crimes such as money laundering, and better prevent financial risks. And digital currency is editable, and digital RMB has the function of collecting user information, but this function can only be

exercised by the central bank that issues digital RMB. The characteristics of digital currency increase the transparency of capital flow, Financial supervision institutions such as the central bank can grasp the main capital flow to the greatest extent so as to maintain financial stability.

3.2 Promote innovation of supervision mode.

The development of digital currency blurs the boundary of financial market, and different financial institutions may have overlapping business, while different regulatory standards lead to the emergence of regulatory arbitrage. At the same time, the development of digital currency has given birth to many new industries, which are not within the scope of the current financial supervision, so there is a regulatory gap. The promotion of digital currency is bound to promote the innovation of supervision mode. It is necessary to unify the supervision standards, bring new industries into the supervision scope, strictly divide the supervision scope, and reduce the waste of supervision resources.

3.3 The risk of digital currency increases the difficulty of financial supervision.

First of all, the distributed bookkeeping mode in digital currency has caused the dispersion of information processing such as transactions, which has increased the difficulty and complexity of supervision. Secondly, before the appearance of digital currency, large-scale capital entering and leaving the customs needed financial institutions, and unconventional cross-border capital flows would be monitored and stopped. The appearance of digital currency increased the space for cross-border capital flows. This aggravates the problem of disorderly capital flow, and brings hidden dangers to financial supervision and financial security. Furthermore, digital currency has a large number of issuers. At present, China's blockchain technology is still in the development stage, not yet fully mature, and the current regulatory scope is not comprehensive, so there are certain regulatory loopholes. Once criminals discover regulatory loopholes, they will use them for their own profit. It will cause irreparable loss to users.

4. Suggestions on China's Financial Supervision Based on digital currency

4.1 Vigorously develop supervision science and technology

To vigorously develop supervision science and technology, we must first focus on cultivating the reserve army for the development of digital technology and improving the quality and ability of financial supervisors; Secondly, we should deepen technological reform, keep the leading position in 5G, blockchain, big data, AI and other technologies, and try to combine these technologies with digital currency. Improve the ability to prevent, identify and deal with cross-industry and cross-market financial risks, and build a safer, more stable and more mature financial supervision system; Furthermore, it is necessary to create a fair competition environment, and encourage and guide large financial institutions and financial technology enterprises to participate in R&D and exploration in digital currency.

4.2 Adopt penetrating supervision method.

Build an all-round and multi-level financial management system, clarify supervision responsibilities and division of labor, realize full coverage of supervision scope, strengthen industry self-discipline, improve supervision efficiency, connect digital currency's capital sources, intermediate links and final investment, identify the nature of financial business and behavior according to the principle of "substance over form", and break the identity label. Distinguish the status and nature of circulation in digital currency, supervise the business and behavior of financial institutions in the whole process, and curb the occurrence of financial crimes.

4.3 Strengthen international regulatory cooperation.

The issuance of digital currency has increased the flow of transnational capital, and the abnormal large-scale transnational capital flow will affect the security of the monetary and financial systems of various countries. Therefore, it is necessary for countries to strengthen information exchange and cooperation, formulate uniform international standards, strengthen digital currency's technology sharing, and jointly explore the future development mode of digital currency. We will jointly crack down on cross-border crimes in monetary and financial affairs and jointly safeguard the stability of the global financial system.

References

- [1] Zhao Y. The construction of financial supervision system for legal digital currency in my country [J]. Chongqing Social Sciences, 2020(05):74-83.
- [2] Zhong WM, Li LJ, Zhang SQ, Zhong CJ, Zhang FJ. International Experience and Enlightenment of Central Bank Digital Currency Development [J]. Fujian Finance, 2022(03): 58-64.
- [3] Wei PF. Research on the development and supervision of financial technology in my country [J]. Northern Finance, 2019(11):8-12.
- [4] Hong J. Research on my country's financial supervision based on digital currency [J]. China Management Information, 2021, 24(22): 80-81.
- [5] Wang YF. Reflections on the reform of China's financial regulatory system [J]. Industrial Innovation Research, 2019(12):101-102.
- [6] Yong X. Research on my country's Internet Financial Supervision [D]. Jilin University of Finance and Economics, 2018.
- [7] Bao R, Deng RQ. Research on the Risks and Countermeasures of Digital Currency [J]. China Agricultural Accounting, 2022(04):11-16.
- [8] Jiang YM. The development trend of digital currency and the feasibility suggestion for risk management and control [J]. Times Economic and Trade, 2022, 19(03): 16-18.
- [9] Arias Acuna, Gonzalo and Sanchez Pullas, Andrés. The Digital Currency Challenge for the Regulatory Regime. Rev. chil. derecho tecnol. [online]. 2016, vol.5, n.2, pp.173-209.
- [10] Marple T. (2021). Bigger than Bitcoin: A Theoretical Typology and Research Agenda for Digital Currencies. Business and Politics, 23(4), 439-455.