

Research on China and British Digital Currency Future Development

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Abstract: This study explores the development and future trends of Central Bank Digital Currencies (CBDCs) by focusing on the comparative analysis of China's Digital Currency Electronic Payment (DCEP) and the UK's proposed digital pound. This paper uses case studies and literature reviews to look at how the two countries have different approaches to CBDC development, what makes them different, and what these differences mean for the global financial system as a whole. The findings reveal that China has achieved significant progress with its digital RMB, implementing extensive pilot projects across various scenarios such as retail payments, government subsidies, and cross-border transactions. This proactive approach reflects China's focus on domestic modernization and the internationalization of the yuan. In contrast, the UK has adopted a cautious strategy, emphasizing research, policy formulation, and risk assessments to address potential challenges related to financial stability and privacy before launching the digital pound. Key drivers of CBDC development include technological innovation (blockchain, cryptography), economic and social needs (financial inclusiveness, efficiency), and geopolitical considerations. The study concludes that CBDCs have the potential to transform global payment systems, improve financial inclusivity, and offer novel tools for monetary policy.

Keywords: Digital Currency Electronic Payment(DCEP), Digital Pound, Central Bank Digital Currency (CBDC)

1. Introduction

With the rapid advancement of the Internet, big data, and cloud computing, digital currencies are driving transformative changes in the global financial system[1], particularly in the realm of payments. Central Bank Digital Currencies (CBDCs) represent a pivotal innovation, offering the potential to enhance financial inclusiveness, improve payment efficiency, and reshape the traditional monetary system[2]. As a state-issued digital alternative to physical currency, CBDCs provide a secure and efficient means of transaction while enabling central banks to exercise greater control over monetary policy. Among the global leaders in CBDC development are China and the United Kingdom, whose approaches to digital currency demonstrate distinct strategies and priorities. China's Digital Currency Electronic Payment (DCEP), or digital RMB, has achieved remarkable progress, with extensive pilot programs and expanding domestic and international applications. In contrast, the UK has adopted a more cautious stance, prioritizing research, policy formulation, and risk assessment for its proposed

"digital pound." This research seeks to compare the development trajectories of the Chinese digital RMB and the British digital pound, exploring their driving factors, current progress, and potential implications for the global financial landscape. By examining these two cases, the study sheds light on the role of CBDCs in advancing financial innovation and fostering economic resilience in an increasingly digitized world[3].

The emergence of CBDCs marks a profound milestone in the evolution of modern finance, addressing pressing economic and social needs in a rapidly digitalizing era. Governments and central banks worldwide are exploring CBDCs to meet growing demands for secure, efficient, and inclusive payment solutions while maintaining monetary sovereignty amidst the rise of decentralized cryptocurrencies[4]. China and the UK provide compelling examples of contrasting approaches to CBDC development. China, as a global leader, has actively promoted its digital RMB through widespread pilot projects, aiming to modernize its domestic payment infrastructure and enhance the internationalization of the yuan. Meanwhile, the UK has focused on establishing a robust regulatory and technical framework for the potential issuance of a digital pound, emphasizing financial stability, privacy, and public trust. This study delves into the technological innovations, policy initiatives, and economic drivers underpinning these developments, offering a comparative analysis of their respective strategies. Furthermore, it highlights the broader implications of CBDCs for reshaping global payment systems, fostering cross-border economic collaboration, and enhancing financial inclusiveness. By contextualizing these developments within the broader landscape of digital finance, this research underscores the significance of CBDCs in addressing global challenges and advancing financial innovation in the 21st century.

2. Literature Review

2.1. China Digital Currency Status

China Digital Currency-DCEP is a legal digital currency issued by the People's Bank of China. Since 2020, digital RMB has launched pilot projects in Shenzhen, Suzhou, Chengdu and other places. Covering multiple scenarios such as retail payment, transportation travel, government subsidies and other scenarios. As of the end of 2023, Digital RMB has expanded to a comprehensive promotion in many cities. Experimental applications are performed in the field of cross-border payment. In addition, China's digital RMB to achieve "double offline" payment. Provide payment for remote areas and unstable environment[5].

2.2. British Digital Currency Status Quo

The Bank of England is actively studying the release of the numeric pound. However, the central bank has not yet made a final decision. According to Andrew Bailey, the President of the State Bank of Britain, the central bank plans to make decisions on the implementation of the digital pound by 2025. At present, the Bank of England is evaluating the potential advantages and risks of digital currency, including the impact on financial stability, monetary policy and user privacy. Although the digital pound has not been officially launched, the research and preparation of the Bank of England show that Britain is laying the foundation for possible digital currency issuance in the future.

3. Compare the Current Status of Digital Currency Between the Two Countries

China and Britain have adopted different strategies in the field of digital currency[6] China actively promotes the R & D and promotion of Digital RMB (E-CNY). It has launched pilots in many cities and officially launched the official digital RMB wallet in January 2022. [3]Although the United Kingdom has not yet issued its digital currency, it is actively researching and exploring related

technologies. The Bank of England released a digital currency white paper in 2021 and cooperated with other countries.

4. Driven Factors for the Future Development of Digital Currencies

4.1. Technical Innovation

The development of blockchain and division's ledger technology provides a safe, efficient, and transparent infrastructure to digital currency, which has promoted the credibility and extensive application of digital currencies. Secondly, encrypted technology can have efficient encryption algorithms to ensure the privacy and security of digital currency transactions. It can effectively increase the information used by users. Finally, the development of mobile payment and cash society has accelerated the promotion and popularization of digital currencies[3].

4.2. Promotion of Government Policy

The central banks of various countries are actively studying and piloting digital currencies. For example, China's digital RMB and the EU's digital euro plan are to improve the effectiveness of monetary policy and improve the efficiency of the payment system[7]. Second, the People's Bank of China took the lead in launching the digital yuan (e-CNY) and piloted it in many cities, with the aim of improving the transmission efficiency of monetary policy, optimizing the payment system, and strengthening the control of financial risks. At the same time, the Bank of England (BoE) is also actively studying the feasibility of a "digital pound" (Bitcoin) and plans to support its implementation through a legislative and policy framework [8] to address the trend towards a cashless society and protect financial stability. These policy measures show that digital currencies will become an important part of the future monetary system, and at the same time, they can better cope with the problems of inefficient cross-border payments and high transaction costs.

4.3. Economic and Social Needs

First of all, consumers' demand for convenient payment methods continues to increase. Because in contemporary society, time is equal to money, which has accelerated the trend of cashless society around the world, and provided motivation for digital currency Guangfa. Secondly, the problem of high payment costs and low efficiency has also promoted the rapid development of digital currencies, such as in international economic cooperation frameworks such as the "Belt and Road" initiative in China. In the end, digital currency can significantly improve financial inclusiveness and provide convenient financial services for consumers who have not touched the traditional financial system[9].

4.4. Market Competition and International Strategy

The rise of decentralized cryptocurrencies, such as Bitcoin and Ethereum, has put the central bank's digital currency under pressure and also provides practical experience for its development. The demand for geopolitics and economic digitalization has also promoted the goal of internationalization of currency through digital currencies, such as China attempting to expand the international influence of RMB through digital RMB[5]. In particular, in countries along the "Belt and Road" and cross-border trade[10], reduce dependence on the dollar system. Second, the UK is focusing on cementing London's position as a global fintech hub by exploring the "digital pound" (Bitcoin). The UK tends to build a more inclusive and innovative digital currency ecosystem to attract international capital and financial services. In addition, the UK is also actively participating in the development of international digital currency standards, trying to occupy a dominant position in the global rules framework. The competition and cooperation between the two countries in the field of digital

currency will profoundly affect the future global financial order and promote the reconstruction of the international monetary system[11].

5. Discussion

5.1. Current Achievement

In recent years, the exploration of China and the United Kingdom in the field of digital currency has shown different development paths and strategic priorities. The People's Bank of China (PBOC) launched the Digital RMB (E-CNY) project, securing a leading position in the world. According to a report released by the People's Bank of China in 2023, as of December 2023, the digital RMB pilot cities have expanded nationwide, with a cumulative transaction value of 1.8 trillion yuan, and the number of users exceeded 300 million[5] Digital RMB in actual applications. It has covered the government subsidy distribution, transportation payment, and super -consumption of consumption. For example, during the Beijing Winter Olympics in 2022, digital RMB was widely used for the payment scenario of foreign athletes and tourists[12]. The Chinese government's goal is to promote the modernization of the domestic payment system through digital currency, while reducing dependence on the international payment system.

In contrast, the development of digital currency in the UK is more focused on the establishment of research and policy frameworks. In February 2023, the Bank of England and the Ministry of Finance jointly issued the "British Digital British Development Consultation Documents", which clearly stated that the "digital pound" that may be issued in the future will be used as a supplementary currency, not to replace the existing cash (Bank of England, the Bank of England,,,, 2023). The British digital currency strategy emphasizes financial stability and privacy guarantee, and focuses on technology feasibility and social acceptance. For example, the Bank of England launched a number of technical tests in 2023 to evaluate the feasibility of cooperation with private enterprises. At the same time, it emphasizes that the payment fairness of small and medium -sized enterprises and vulnerable groups must be ensured. This gradual development strategy reflects Britain's prudent attitude towards digital currency's potential risks.

5.2. Look Forward to the Future

The trend of digital currency between China and Britain will continue to be affected by their respective economic structure and policy goals. In China, the popularity of digital RMB will further promote the process of regional economic digitalization. According to the forecast of the International Monetary Fund (IMF) in 2024[13], China will promote the application of digital RMB in cross -border payment under the "Digital Silk Road" framework. For example, China and the UAE reached an agreement in 2023 to try the bilateral payment systems of digital RMB and the UAE digital Diham. Preliminary data showed that transaction efficiency increased by 35%[14]. The internationalization of digital RMB will provide low -cost[8], high -efficiency cross -border payment services for countries along the "Belt and Road", while improving the international status of the RMB.

Britain pays more attention to the role of digital currencies in financial innovation and regulatory balance. In 2025, the UK plans to complete the technical standards of the digital pound, and verify its application[15] in retail payment in small -scale pilots. In addition, the British government is actively promoting the integration of CBDC (central bank digital currency) and the existing fintech ecosystem[16]. For example, London Financial Technology Revolut has cooperated with the Bank of England to test the potential of digital pounds in international remittances. In the future, British digital currency will be used to consolidate its position as a global financial center, while strengthening its supervision capabilities for decentralized finance and cryptocurrency markets.

6. Conclusion

The rise of digital currencies, especially central bank digital currencies (CBDC), represents a major change in the global financial pattern. This report highlights the distinct approaches taken by China and the United Kingdom in the development of their respective CBDCs. The rapid deployment of Chinese Digital RMB (DCEP) shows its determination to use digital currency to promote domestic economic growth and expand the international influence of the RMB. Although Britain actively studies the digital pound, it pays more attention to financial stability, user privacy, and balance between innovation and supervision. The future trajectory of the CBDC of the two countries may be affected by continuous technological progress, continuous development of regulatory frameworks, and the growing demand for high -efficiency and inclusive payment systems. Although this report mainly depends on public data and existing documents, the rapid development of digital currencies requires continuous monitoring and research. In the end, the successful implementation and extensive adoption of CBDC will require international cooperation, and careful consideration of the opportunities and challenges it brings. The potential of digital currency's change is undeniable, and its impact on future finance has just begun to appear.

References

- [1] Bank of International Settlements (BIS). (2021). *CBDCs: An Opportunity for the Monetary System*.
- [2] Zhang, X., Li, Y., & Wang, L. (2022). *The Evolution of Digital Currency and its Implications*.
- [3] Nakamoto, S. (2008). *Bitcoin: A peer-to-peer Electronic Cash System*.
- [4] International Monetary Fund (IMF). (2021). *Digital Money Across Borders: Macro-Financial Implications*.
- [5] People's Bank of China (PBoC). (2023). *Progress of the Digital Yuan*.
- [6] International Monetary Fund (IMF). (2021). *Digital Currencies: Opportunities and challenges*.
- [7] Bank for International Settlements (BIS). (2021). *CBDCs: Opportunities and Risks*.
- [8] Bank of England. (2021). *Central Bank Digital Currency Consultation Paper*.
- [9] World Bank. (2022). *Fintech and Financial Inclusion in the Digital Economy*.
- [10] Digital Finance Research Center, Central University of Finance and Economics. (2022). *Analysis of the internationalization path of the digital yuan*. *Digital Finance Research*
- [11] Auer, R., Cornelli, G., & Frost, J. (2021). *Rise of the central bank digital currencies: drivers, approaches, and technologies*. *Bis Quarterly Review*.
- [12] China Daily. (2021, June 22). *Piloting digital RMB's path for 2022 Olympics and beyond*. *China Daily*. <https://www.chinadaily.com.cn/a/202106/22/WS60d181fda31024ad0bacaaf3.htm>.
- [13] IMF. (2024). *"The Role of Digital Currencies in Cross-Border Payments"*.
- [14] People's Daily. (2024, February 1). *Digital yuan achieves cross-border payment in the UAE for the first time*. *People's Daily Online*. <http://world.people.com.cn/n1/2024/0201/c1002-40171220.html:cite>
- [15] Bank of England. (2023). *"The Digital Pound: A New Form of Money for Households and Businesses"*.
- [16] Financial Times. (2024). *"UK Fintech and the CBDC Pilot Program"*.