

# ***The Rise of Digital Currencies: Challenges for Commercial Banks and New Opportunities for Financial Stability***

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**Abstract:** In the context of the digital transformation of the global economy, digital currency, as a product of financial technology innovation, is gradually changing the traditional financial ecology, especially posing new challenges and opportunities to the operation mode and financial stability of commercial banks. This study systematically comprehends the current status of domestic and international research on the impact of digital currencies on commercial banks by means of a literature review and adopts the case study method and the case analysis method, and clarifies the specific points of influence of the development of digital currencies on the business structure of commercial banks. It reveals the dual influence of digital currency on the business structure and financial stability of commercial banks, and moreover puts forward targeted coping strategies, which are of great theoretical and practical significance for commercial banks to grasp the opportunities and cope with the challenges of digital currency development.

**Keywords:** digital currency, central bank digital currency, commercial banks, block chain

## **1. Introduction**

With the rapid development of digital technology, digital currencies are on the rise, bringing profound changes to the global economic landscape. This trend not only prompts commercial banks to face unprecedented challenges, such as reconfiguration of business models and upgrading of risk management, but also breeds new opportunities to maintain financial stability and promote financial innovation. How to grasp the direction in the midst of change has become an important issue for commercial banks and regulators to explore together.

## **2. Literature Review**

Stephen D. Williamson [1] analyses the role of central bank digital currencies in the financial crisis, pointing out their importance in providing safe assets. Peterson K Ozili [2] examines the opportunities and risks of introducing CBDCs in Nigeria, providing a valuable case study for other developing countries. A. Ya. Zaporozhan [3] discusses the progress of the Central Bank of Russia's digital currency, revealing how technological and political factors have come together to influence the implementation of the CBDC. W. Shen and Liyang Hou [4], on the other hand, explore the impact of the Chinese central bank's digital currency on monetary policy and payments competition from a Chinese perspective, arguing that it is both a game changer and a regulatory toolkit that is part of the

regulatory toolbox. The study by Ramón Adalid et al [5] further extends the CBDC discussion to include cross-border payments and the impact on the international financial system. Ozili, P. K. [6] comprehensively reviews and analyzes the current status and trends of research on Central Bank Digital Currency (CBDC) globally.

Jiaqi Zhang research [7] Fintech is changing the banking service model while driving the development of new products and adjusting market strategies. Central Bank Digital Currency (CBDC) has become a focal point in the global financial arena due to the rise of digital currencies. Morgan Ricks et al [8] explore the concept of the digital dollar and the challenges and opportunities it poses to the traditional financial system. Juan Ayuso and Carlos Conesa [9] provide a comprehensive introduction to the current CBDC discussion, highlighting its potential impact on the potential impact on monetary policy and payment systems. Ozili, P. K. [10] aims to analyze the role of Central Bank Digital Currency (CBDC) in earnings management in the banking sector and focuses on how CBDC activities affect banks' earnings management strategies.

### 3. The State of Domestic Research in China

Research by domestic scholars has shown a growing momentum in exploring the challenges posed to commercial banks by the rise of digital currencies as well as new opportunities for financial stability. Commercial banks are facing unprecedented pressure to change, especially with the rapid development of financial technology, especially the gradual promotion and application of digital currencies. This change is not only reflected in the business model and operation mechanism, how to ensure the stability of the financial system while using emerging technologies to enhance service efficiency.

On the one hand, domestic studies in China have pointed out that the introduction of digital currencies can bring many opportunities for commercial banks to innovate. For example, banks can greatly reduce the cost of cross-border payments by integrating blockchain technology as well as ensuring transaction security. The application of digital currencies can also enhance the accessibility of banking services, and the provision of financial services through digital currency platforms can effectively fill the gaps in traditional banking services in remote areas.

On the other hand, domestic scholars are concerned about the possible risks of digital currency in the future. Since CBDC is directly released by the central bank, which may reduce the public's reliance on commercial bank funds, most scholars believe that the introduction of central bank digital currency (CBDC) is likely to affect the traditional deposit and loan business of commercial banks. Scholars also offer differing views on how much influence digital currencies will have on financial stability. Some studies have argued that digital currencies can improve the efficiency of the use of the payment system and strengthen the stability of the financial system; other scholars are concerned about the possibility of increasing illegal activities such as money laundering and financing, as well as the threat posed to financial stability because of the characteristics of digital currencies in terms of their anonymity and cross-border nature.

In China's domestic research, scholars have proposed a variety of strategies to face the opportunities and challenges posed by digital currencies. These strategies include strengthening the construction of regulations and systems to ensure the legal and compliant use of digital currencies; promoting cooperation between commercial banks and technology companies to jointly develop, safer and more efficient fintech products; and strengthening the popularization and education of the public's knowledge of digital currencies to increase awareness and acceptance of digital currencies in the whole society. These are the current popularization of digital currency knowledge in our society.

In summary, not only have the innovative opportunities brought by digital currencies been explored in depth, but also the risks and challenges they may cause, and the domestic research on the challenges of the rise of digital currencies on commercial banks and new opportunities for financial

stability has not been neglected. Future research needs to pay further attention to the advancement of digital currency technology, the improvement of regulatory policies, and the innovation of commercial banks' coping strategies in promoting the sustained and healthy development of commercial banking businesses while safeguarding financial stability.

#### 4. Current Status of Foreign Research

The ascent of digital currencies has prompted extensive scholarly examination within the international academic community, focusing on the attendant challenges and opportunities for commercial banks and financial stability. As an emergent industry, FinTech exerts a profound influence on the conventional banking business model. This paper delves into the historical development, current landscape, and unique attributes of FinTech, while also scrutinizing its implications for banking business models. Through a series of case studies, the analysis illuminates FinTech's role in catalyzing innovation and growth within commercial banks. Furthermore, the study proposes strategies for banks to effectively adapt to FinTech's disruptions, culminating in a prognosis for the industry's future trajectory.

Scholars delve into the research in the field of digital currency, especially central bank digital currency (CBDC), from multiple dimensions. For example, Morgan Stanley et al. discuss the potential impact of the digital dollar in detail through the article "Finance: the potential impact of the digital dollar and its implementation framework". In their study, Juan Ayuso and Carlos Conesa provide background on the current debate about central bank digital currencies and explore their potential monetary policy implications. Stephen D. Williamson's article focuses on the role that central bank digital currencies have played during the financial crisis, and their role in the article by Stephen D. Williamson focuses on the role of central bank digital currencies in the financial crisis and analyses their functioning in a "risk averse" scenario[1].

In addition, Peterson K Ozili focuses on the opportunities and risks of digital currencies for central banks in Nigeria[2], providing unique insights from the perspective of a developing country, while A. Ya. Zaporozhan's study focuses on the development of the digital ruble in Russia [3], providing an empirical case study for understanding the strategies of different countries around the globe in the area of digital currencies. Hou's article discusses the impact of the Chinese central bank's digital currency on monetary policy and payments competition, emphasizing the dual role of digital currencies as game changers or regulatory tools[4].

Ramón Adalid et al.'s findings, on the other hand, take a broader look at the impact of central bank digital currencies on banking intermediation, suggesting the far-reaching impact that digital currencies may have on traditional banking business models[5]. Peterson K. Ozili in another study reviewed the research literature on central bank digital currencies globally in order to understand the current research trends. His further study also discussed the influence of central bank digital currencies on banks' earnings management, especially in terms of loan loss provisions[6].

To be able to provide a theoretical and practical basis for understanding the challenges and opportunities in the background of this change, Li Wenwen's research underlines the influence of both Fintech and digital currencies on the traditional financial sector.

In conclusion, the literature on the emergence of digital currencies and their impact on commercial banks and financial stability indicates that digital currencies present both opportunities and challenges for improving the efficiency and stability of the financial system. These include challenges to the traditional banking business model. The studies in this field contribute to our understanding of the potential influence of digital currencies and provide valuable reference information for policymakers and bankers.

## 5. Trends in Development

Under the wave of fintech, digital currencies are gradually reshaping the global financial ecosystem, presenting unprecedented challenges and opportunities for commercial banks in terms of their business practices and financial soundness. Digital currency, with the rapid development of technology, is no longer just an emerging payment tool, but a product of financial innovation and a game of regulatory strategy. In this context, the study of the influence of digital currencies on the business model of commercial banks and the potential contribution to financial stability, and the discussion of the influence of digital currencies on the traditional financial sector are very important.

A fundamental challenge to the traditional banking business model is the rise of digital currencies, particularly the development of central bank digital currencies (CBDC). According to relevant studies, the application of CBDC may reduce the traditional position of commercial banks as money creators and credit providers. Because CBDCs are released directly by the central bank, this could reduce customers' reliance on commercial banks' money intermediation services, allowing them to bypass the traditional banking system and provide direct access to consumers and businesses. Also, the popularity of digital currencies may make banks' deposits and loans less profitable.

Another development trend is the development of new business models based on digital currencies and the improvement of operation efficiency. For example, digital currencies incorporated with blockchain technology can make transactions more transparent and faster, and reduce the costs of complex processes for cross-border payments; commercial banks can further enhance their competitiveness in the market by participating in the development and circulation of digital currencies and providing new services such as blockchain technology-based payment solutions, asset management smart contracts, etc.; and the provision of these services will bring business opportunities and operational benefits. Innovative products that can bring business opportunities and operational benefits through the provision of these services. Commercial banks can also improve their operational efficiency and market competitiveness.

More importantly, the development of digital currencies opens up a way to promote financial stability, as CBDCs can function as a secure asset management tool, and because CBDC transaction data can be tracked in real time, regulators are able to more effectively prevent and combat financial crimes, including anti-money laundering (AML) financing of terrorism (CFT) activities and other financial crimes, thereby maintaining the financial market's integrity and stability of the financial market. With the development of digital currencies, financial stability will be further safeguarded; this is a topic of great practical significance.

To sum up, the rise of digital currency in the context of the digital era undoubtedly challenges the traditional commercial bank's mode of operation and brings unprecedented opportunities and space for it. While bringing impacts and challenges to the banking industry, it also brings huge space and opportunities for its innovative development and business transformation. Promoting the healthy development of the banking industry and financial security and stability in the digital era is a major issue in research and practice. While exploring and researching how to effectively promote the balance between challenges and opportunities and healthy development of the banking industry, how to protect the security and stability of the banking industry.

## 6. Possible Problems

The rise of digital currencies has presented commercial banks with unprecedented challenges and new opportunities for financial stability. However, this development has not been without its obstacles, and it has been accompanied by a series of potential problems and risks that have had to be addressed and resolved.

It is increasingly common for traditional banking to be impacted by the rapid pace of technological change, especially as blockchain technology and digital currencies become more prevalent. Consumer demand for financial services is changing, with a greater tendency towards fast, convenient and predominantly low-cost payment methods, forcing commercial banks to rethink their business models to match the digital age. One of the key issues facing commercial banks today is the need to maintain their existing customer base, and how to provide younger customer segments, who are more focused on emerging fintechs, with services that are more in line with their needs.

The introduction of digital currencies has the potential to lead to significant changes in liquidity. The issuance of digital currencies by central banks will, to a certain extent, affect the ability of traditional banks to absorb and lend funds, which in turn will have an impact on their profitability. In addition, the emergence of CBDC as a new asset class may change investors' asset allocation strategies, which will have some impact on the composition and cost of banks' liability side.

Another important issue related to digital currencies is security and privacy protection, which is a new risk with the increasing number of digitized transactions. Commercial banks will have to invest more resources in enhanced cyber security measures to protect their customers' financial information from unauthorized access or theft, which is a challenge that commercial banks have to face today. At the same time, commercial banks must find a balance between improving transaction efficiency and safeguarding user privacy, which is also an important issue they are currently facing.

Another issue that cannot be ignored is the uncertainty of regulation. Currently, the digital currency policies of many countries are still unclear, troubling commercial banks in their longer-term strategic planning. Frequent policy changes may lead to higher compliance costs for banks while increasing operational uncertainty.

Finally, digital currencies may exacerbate financial market shocks. Market sentiment and capital flows may be more rapid and violent, as the digital currency market is highly globalized and features 24/7 trading. In response to potential market disruptions, commercial banks must demonstrate robust market monitoring and risk management capabilities.

In conclusion, although digital currency brings new opportunities for commercial banks, the problems and challenges it brings cannot be ignored. Commercial banks need to actively explore new paths to adapt to digital currencies while remaining vigilant.

## 7. Proposed Solutions

The rise of currencies not only brings great challenges to commercial banks, but also brings new opportunities to the entire financial system. In order to adapt to the development of digital currencies, commercial banks must take a series of strategic measures to maintain their competitiveness, so they can maintain the stability of the financial system and remain competitive in the highly competitive market.

The introduction of blockchain technology is a prime way for commercial banks to overcome the many challenges caused by current digital currencies. Integrating blockchain technology into the business processes of commercial banks can not only enhance the transparency and effectiveness of transactions, but also reduces costs and improves efficiency for commercial banks. For commercial banks, such approaches can improve the security and reliability of transactions, and blockchain-based cross-border payments will significantly shorten transaction times and save associated costs. In addition, blockchain technology can also help banks improve their ability to manage customer identity and transaction records, resulting in improved anti-money laundering and anti-fraud capabilities. So, the application of blockchain technology by commercial banks is an urgent task to meet the challenges of digital currency, and an inevitable move to adapt to the development trend of the times. It is very meaningful for the transformation of the whole financial system.

Firstly, commercial banks should develop new business models related to digital currencies positively, develop new payment systems and credit products and provide asset management services, so as to achieve a seamless integration with digital currencies. While launching financial products based on digital currencies to attract customers, commercial banks can also develop digital wallet services to enable customers to easily store and use digital currencies. In addition, commercial banks can launch financial products based on digital currencies to attract customers who have a strong interest in new types of investments. Commercial banks also need to conduct relevant research to improve their risk control capabilities to avoid losses.

Commercial banks also cannot ignore the important strategy of strengthening cooperation with fintech companies, from which they can obtain the support of advanced technology, as well as make use of the user base and innovation capability of the partners to jointly launch new products to open up new markets, helping traditional banks to rapidly transform under the digitalization trend, while at the same time facilitating the innovation and growth of fintech to cope with the increasingly fierce competition in the market.

To address the potential risks posed by digital currencies, commercial banks need to improve their internal risk management and compliance systems, including setting up specialized risk assessment teams to monitor the risk dynamics of the digital currency market and oversee the formulation and implementation of response strategies. At the same time, they should ensure that all activities related to digital currencies are in line with relevant national and international laws and regulations. Banks should educate and guide their customers to help them deepen their understanding of digital currencies and use them safely as an emerging financial instrument.

At last, participation in policy advocacy and discussion of public policy is an essential part of commercial banks. Banks should actively participate in the establishment of digital currency policies, contributing their knowledge and industry view and opinions to the development of the industry, while ensuring the smooth release of policies and the effective protection of consumer rights and interests in order to maintain the stability and prosperity of the financial market.

By taking the above measures, commercial banks will not only be able to effectively deal with the challenges caused by digital currencies, but also make use of the opportunities in this new field to promote their own innovation and development, and finally achieve sustainable prosperity in the age of digital transformation.

## 8. Conclusion

Traditional commercial banks are facing great challenges and opportunities because of the current wave of digital currencies. While the original banking business model of commercial banks has received an attack, the development of financial technology has also brought new opportunities and challenges to commercial banks, because the release of digital currencies is changing the financial market structure.

As an emergent industry, FinTech exerts a profound and multifaceted influence on the banking sector. According to Zhang Jiaqi's research, FinTech has catalyzed innovation in banking operations, simultaneously compelling traditional financial institutions to adapt their strategies in response to dynamic market conditions. Consequently, commercial banks must adopt effective measures to address the ramifications of FinTech, encompassing augmented technological investments, streamlined service processes, and other optimizations. By implementing such initiatives, banks can enhance their business environment, elevate the quality of their services, and ultimately preserve their competitive edge while identifying and cultivating new avenues for economic growth.

And at the same time, the emergence of central bank digital currency for financial stability brings new opportunities, from Morgan Ricks et al.'s research to Peterson K. Ozili's in-depth analysis shows that the CBDC can enhance the efficiency and security of the payment system, improve the

transmission effect of monetary policy. In particular, when an economic emergency occurs, CBDC can be used as a "safe haven" to stabilise the financial market while playing a positive role in protecting consumer interests.

However, the introduction of CBDCs is also accompanied by risks and challenges, specifically, the digital ruble, as mentioned by A. Ya. Zaporozhan, in terms of cybersecurity and data protection. In addition, as the role of commercial banks may change in the CBDC system, this requires banks to position themselves in the new business environment and develop according to the new situation while maintaining their intermediary role. Some risks and challenges may exist with the introduction of digital rubles.

Some research suggests that in terms of the CBDC digital currency, the study released by Shen W. and Liyang Hou points out that the CBDC is not only a simple payment tool, but also an important approach to advancing the modernization of monetary policy and enhancing China's international competitiveness. This indicates that the successful establishment of CBDC requires careful policy design and cross-sectoral collaboration. The results of this study also show that there are still some gaps in the development of digital currency in China.

In conclusion, the rise of digital currencies has brought challenges and opportunities to commercial banks at the same time. The rapid development of financial technology has prompted banks to constantly push forward their business, improve their domestic management system and payment system, and launch innovative financial products. The launch of the central bank's digital currency, in addition to maintaining financial stability, also brings new support points for the innovation and development of banking business. Commercial banks should balance between these two aspects, improve the service quality and efficiency on the basis of continuous technological innovation. Take part in the development process of the central bank's digital currency at the same time. It will maintain its competitiveness in the new financial ecology and further promote the integration of fintech and traditional banking business.

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