

The Impact of China's Central Bank Digital Currency on Domestic Commercial Banks

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Abstract. With the arrival of the Internet big data era, the digital economy has become one of the important foundations of China's economic and social development, and the rapid development of digital currency is the basic driving force and important symbol of the current Internet big data era. With the continuous transformation of the digital currency background, finance has become a modern economic system, both domestic and foreign, the competition in the financial industry is also gradually intense, and the innovation of the digital currency background has become the main direction of the development of modern China's financial industry. In 2020, China's central bank digital currency began to carry out pilot work in Shenzhen, Suzhou, Xiong'an New Area and Chengdu, China became the world's first country to issue sovereign digital currency in the world. The issuance of the central bank's digital currency will bring new opportunities and challenges to the domestic banking industry. The issuance of central bank digital currency will bring great challenges to the traditional business model of commercial banks, and at the same time, it will increase the competition among commercial banks and bring more pressure as well as new risks to the financial infrastructure of commercial banks. Therefore, commercial banks should adjust their business model, strengthen the cooperation among the banking industry, avoid vicious competition among banks, strengthen the financial infrastructure of commercial banks, and improve the risk prevention and control level of commercial banks comprehensively.

Keywords. Digital currency, commercial banks, operational architecture, cross-border business

As a new way of currency existence, digital currency has a profound impact on the future development of currency. Digital currency has become the focus of currency issuance with its advantages of low transaction cost, fast transaction speed, and security of use, and is more in line with the development requirements of digital economy and big data era. Digital currencies have significant effects in reducing the operating costs of commercial banks, widening the boundary of commercial banks' financial services, and improving the efficiency of commercial banks' cross-border settlement, but they also pose a significant test for commercial banks' risk prevention and control ability, business competition ability, and overall profitability. [1] To this end, commercial banks should improve their overall risk management capabilities, accelerate the construction of digital systems, and broaden their financial service functions to cope with the continuous development of digital currencies and further meet the needs of China's financial development.

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1. Theoretical basis of central bank digital currency

1.1. Concept of digital currency

In terms of conceptual scope, digital currencies can be divided into two categories: non-statutory digital currencies and legal digital currencies. Cryptocurrency can be divided into ordinary Cryptocurrency and Stablecoin, the former including Bitcoin (BTC), Ether (ETH) and EOS coins, etc., while the latter including TEDA (USDT) and Libra (Libra), etc. Legal digital currencies mainly include Central Bank Digital Currency (CBDC) and Central Bank Digital Account (CBDA), where CBDC is the digital representation of legal tender.[2]

Digital currencies can be divided into two stages in the order of their creation: the first stage is the creation of non-statutory digital currencies, mainly Cryptocurrency. The first to emerge was the bitcoin class, which mainly contains Bitcoin, Ethereum and Litecoin. Due to the unstable value of the currency, the Stablecoin class came into existence. The second stage of legal digital currency was born. Due to a large number of problems with non-statutory digital currencies and the threat to the status of sovereign currencies in each country, central bank-legal digital currencies came into being.

The People's Bank of China defines digital currency as a "digital payment instrument with value characteristics", which belongs to the central bank's liabilities and is of national credit and unlimited legal repayment. Fan Yifei, deputy governor of the People's Bank of China, refers to the digital currency promoted by the central bank of China as the "central bank digital currency", which is operated by an operator designated by the central bank and is responsible for converting it to the public, with all the attributes and functions of a sovereign currency. At this stage, the central bank's digital currency is mainly located in the cash in circulation (M0).

1.2. Characteristics of the central bank's digital currency

Table 1.Currency comparison table

Currency Type	Definition	Issuers	Legal tender	Currency Form	Reserve rate	Anonymity	Interest payment
CBDC	Central bank-issued legal digital currency	Central Bank	yes	Digital	100%	Controlled anonymity	no
Cash	Banknotes and coins issued by the central bank	Central Bank	yes	In-kind cash	100%	Complete anonymity	no
E-currency	Electronic storage of deposits in the form of legal tender without physical objects	Central Bank	yes	Digital	part	Real Name	yes

Cryptocurrency	A transaction medium created based on some cryptographic algorithm	Not issued by any central agency, not controlled by the central bank	no	Digital	None	Controlled or completely anonymous	no
Virtual Currency	Cannot be circulated in the official environment, only used in the virtual world	Unofficial release, courtesy of the developer	no	Digital	None	Controlled anonymity	no

Table 1 compares the characteristics of the central bank digital currency with other currencies in terms of currency attributes, issuing institutions, and anonymity. The main characteristics of the central bank's legal tender currency are central bank issuance, legal tender, digital form and controlled anonymity. Like cash, the central bank digital currency is subject to 100% reserve and does not pay interest, and circulates in the market in the same way as cash.

First of all, the central bank's digital currency is legal tender, not a contract currency. A contract currency is a currency that can be recognized by all the subjects in a certain range of transactions through the customs of commodity transactions. For example, Bitcoin (BTC) has not been legally recognized as a currency and is a contract currency. In contrast, legal tender is a currency that is specifically defined by national or regional law and has a legally enforceable effect.

Secondly, central bank digital money is digital money, not cash money. Cash money is money that exists in paper or similar forms (coins, etc.) and corresponds to digital money in terms of how it exists. Digital money is money that exists in the form of electromagnetic symbols in electronic devices. The main difference between central bank digital money and cash money is only that they exist in different forms, one in a physical form representing the national credit behind the central bank and the other in an electronic form representing the national credit behind the central bank.

In addition, the central bank digital currency is legal e-money, not deposit e-money. Legal e-money refers to e-money in the form of e-money in central bank customer accounts; deposit e-money refers to deposits in the form of e-money, such as those deposited in third-party payment platforms like Alipay and WeChat. According to the Law of the People's Bank of China, "the legal tender of China is the RMB". [3]Although the two are similar in external form and both require payment to be completed through cell phones and other devices, the central bank digital currency represents the national credit behind the central bank and the deposit e-money represents the credit of commercial banks.

1.3. The operational architecture of our digital currency

1.3.1. Two-tier operation system

China's central bank digital currency is a retail type of central bank digital currency, issued to the public to meet the domestic daily retail payment needs. China's central bank

digital currency adopts a two-tier delivery method of "central bank-commercial bank" and the same centralized delivery mechanism as banknotes, which means that the central bank converts the digital currency to commercial banks or other financial institutions that are allowed to participate in the operation with 100% reserve, and then these institutions will issue and recover the digital currency to the public. The digital currency is issued and recycled to the public. In the whole process, the central bank, as the sole issuer, is responsible for the issuance and recovery of the central bank's digital currency, and commercial banks provide service support and technical support for access to the central bank's digital currency.

1.3.2. Core Elements

The core elements of China's central bank digital currency are "one currency, two banks and three centers": one currency refers to the central bank digital currency, which is a cryptographic digital string representing a specific amount of money guaranteed and signed by the People's Bank of China; two banks refer to the digital currency issuance bank and the digital currency commercial bank; the digital currency issuance bank refers to the database of the People's Bank of China where the unissued or recovered digital currency is stored; the digital currency commercial bank refers to the database of commercial banks where the central bank digital currency is stored; three centers refer to the authentication center, registration center and big data analysis center. [4]The authentication center is the center for centralized management of the central bank's digital currency authorization and user identity information; the registration center is the center for recording the identity of the corresponding users of the digital currency and registering the ownership; the big data analysis center. Big Data Analysis Center. It is a center for analyzing massive data by using big data, cloud computing and other technologies.

2. Analysis of the impact of the issuance of China's central bank digital currency on commercial banks

2.1. The issuance of central bank digital currency brings new opportunities for commercial banks

2.1.1. The issuance of digital currency can reduce the cost of commercial banks

Since legal digital currency has no physical presence and the transaction process is generally handled online, customers' dependence on commercial banks' offline deposit and withdrawal outlets will be greatly reduced. Accordingly, commercial banks can streamline the number of offline branches and reorganize their personnel, saving a lot of security costs, storage costs, money transportation costs and labor costs. At the same time, from a macroscopic overall perspective, the cash management cost of commercial banks will be greatly reduced. Currency management is free from the restriction of physical banknotes, which can eliminate the cost of bundling and transporting banknotes, avoid the loss caused by residual banknotes and counterfeit banknotes, and can eliminate the provision of banknote vehicles and personnel, saving operating costs across the board and improving overall efficiency. On the other hand, big data technology facilitates commercial banks to record and maintain a large amount of customer information data. [5]The circulation transactions of legal digital currency can realize the automatic storage

and analysis of transaction information, which greatly reduces the workload of offline transaction information entry and effectively improves the service quality of commercial banks to customers.

The cost reduction is also reflected in the improvement of the overall financial efficiency of society. The issuance and circulation of legal digital currency will certainly lead to the creation of a new Internet version of the banking system, in which the frequency of financial business transactions will increase significantly, and different transaction subjects save a considerable amount of time costs in this highly efficient transaction process, while the potential transaction risks they need to face are also reduced, which can attract more people to participate in the financial market, activate the potential. This can attract more people to participate in the financial market, activate the potential financial business potential and improve the overall efficiency of the financial market as a whole.[6]

Since cash is a physical entity, commercial banks need to attach great importance to cash business in order to ensure the safety of depositors and commercial banks' assets, and cash business is a high-pressure line that commercial banks cannot touch, and the People's Bank of China, CBRC and other regulatory authorities will strictly punish errors in a cash business, so cash management work is still an important part of commercial banks' daily operation. Considering that the central bank's digital currency does not need to use physical carriers and appears in the form of encrypted digital strings in the digital wallets of commercial banks, there is no cash custody, transportation and counting link, no physical space storage, point-to-point payment and real-time arrival, it will reduce the burden of commercial banks' daily operation and improve their operational efficiency.[7] After the issuance of digital currency, units or individuals do not need to open a separate account in a bank, and the physical cash in circulation will be gradually replaced and withdrawn from circulation, as long as the digital wallet has sufficient balance to complete the payment. It is foreseeable that once digital currency is fully promoted, it will have a huge impact on the cash business of banks, and the counter business of banks will also decline, so some positions related to the cash business will inevitably be abolished.

The central bank's digital currency not only has the same characteristics of unlimited legal compensation as paper money, but also has the advantages of payment convenience, security and speed, which is expected to play a strong role in replacing paper money. [8]With the issuance and promotion of the central bank's digital currency, the existing cash business will be replaced by the digital network, and the cash-related business of commercial banks will be gradually reduced, and the related operating expenses will also be reduced, including streamlining the cash management personnel in the operation lines, reducing the offline self-service machines and supporting facilities, and reducing the vault construction and cash escort expenses. The freed human resources can be put more into precise customer marketing and personalized services to continuously enhance customer experience and promote the transformation of commercial banks into service-oriented banks. The competitiveness of commercial bank branches in the future will be increasingly reflected in the ability to provide personalized customer services and integrated financial service solutions. In addition, with the removal of self-service banks and cash counters and other related supporting facilities, the operational efficiency of commercial bank branches will continue to improve, operating costs will continue to be reduced, and the transformation of lightness will continue to accelerate.

2.1.2. The issuance of central bank digital currency is beneficial to commercial banks' cross-border business development

In today's increasingly accelerated internationalization process, investment cooperation among countries around the world will further deepen, financial activities will gradually increase, e-commerce, logistics, outbound tourism, etc. will be associated with the cross-border settlement, and the payment system can not follow up to limit business development. The current international payment system is dominated by the SWIFT system led by developed countries, and the cross-border payment system has the problems of non-transparency, high price, being time-consuming and low efficiency. The system involves more institutions, and inter-institutional clearing requires "baton" approval, which is cumbersome, and the approval process can only reach 5*24 hours + 4 hours of a system working time, so there may be a large transaction time lag and downtime costs.[9]Based on state-of-the-art network systems, digital currencies can break down barriers to the movement and transfer of funds between countries and provide cross-border payment services around the clock on a global scale. Digital currencies based on national credit backing can greatly improve the efficiency of cross-border settlement. Digital currency payments are built on an interconnected and equally shared technical platform, and users in different countries can complete payment transactions at any time and place after joining the payment system. Building a new global cross-border payment network can effectively improve the current problems of non-transparent, time-consuming and expensive cross-border payments, and will also solve the problem of regulators' review of the authenticity and legality of cross-border payment transactions. Digital currency can further serve the function of a medium of exchange. After the user has passed the qualification audit of cross-border payment and entered the transaction information into the system, he can have the local currency converted into digital currency and then rely on the permission of the cross-border digital currency platform system to transmit to the corresponding digital wallets of overseas users, who can directly use the digital currency for trading activities. Countries around the world can improve the efficiency of cross-border financial information transmission services by building cross-border payment channels from one country's currency to another's. According to World Bank data, the decentralized transaction model supported by digital currencies can make cross-border payment efficiency greatly improved.

2.1.3. The "two-tier operation" system further strengthens the central position of commercial banks

According to the available public information, the issuance and operation of the central bank digital currency adopt the "two-tier operation" model of the central bank and commercial banks, without changing the current currency delivery path and system. The first layer is for the central bank to place the central bank digital currency to commercial banks, and the second layer is for commercial banks to exchange the central bank digital currency to the public, which is basically the same as the current paper currency placement path. The opposite of the "two-tier operation" mechanism is the "single-tier operation" mechanism, under which the central bank will directly issue the central bank digital currency to the public, and commercial banks will not participate in the issuance of the central bank digital currency. Commercial banks do not participate in the issuance of the central bank's digital currency. The PBOC has announced that the central bank digital currency will adopt a "two-tier operation" model.

Compared with the "single-tier operation" model, the "two-tier operation" issuance mechanism further strengthens the key position of commercial banks in the process of

currency issuance and helps prevent "Financial Disintermediation". If the "single-tier operation" system is adopted and the central bank issues the central bank digital currency directly to the public, then the central bank digital currency will be in competition with commercial bank deposits, and the central bank digital currency will have a higher credit rating than commercial bank deposits, which will inevitably have a "crowding out effect" on commercial bank deposits. The central bank's digital currency has a higher credit rating than commercial banks' deposits, which will inevitably have a "crowding out effect" on commercial banks' deposits, causing "deposit migration" and affecting the expansion of commercial banks' assets. The "two-tier operation" model effectively prevents this potential problem and further strengthens the important position of commercial banks in the financial system. In the future, commercial banks can take advantage of this advantageous position to continuously improve their customer service capabilities and better serve social and economic development.

2.1.4. Central bank's digital currency issuance helps banks in anti-money laundering, anti-fraud efforts

Money laundering and fraud inevitably pass through the banking system, so the work of commercial banks in anti-money laundering and anti-fraud has a fundamental role. At present, the anti-money laundering and anti-fraud work of commercial banks is a screening system based on KYC, including a series of functions such as data collection, detection and screening, which has problems such as high reliance on manual work, insufficient ability to implement the intervention, low timeliness of processing and low self-learning ability of the system. The issuance of the central bank's digital currency can help improve the above problems of commercial banks. [9]First, the digitalize full circulation of the central bank's digital currency is conducive to the timely detection of money laundering and fraudulent activities. The central bank digital currency can record every transaction of the currency, improve the supervision of the whole transaction, and effectively solve the current problem of a complicated and hidden chain of money laundering and fraudulent activities, which requires a lot of manual work for screening. Second, it enhances the strength and efficiency of intervention in money laundering and fraudulent activities. The controlled anonymity of the central bank's digital currency helps banks to effectively screen and identify money laundering and fraudulent activities while restricting the payment function of digital wallets in a timely manner, enhancing the ability to intervene in potential money laundering activities. Third, it helps to improve the processing efficiency and intelligence of anti-money laundering and anti-fraud systems. [10]Based on big data technology, banks can continuously train and learn from the big data generated by the central bank's digital currency through artificial intelligence, and use the latest behavioral characteristics extracted from money laundering and early activities to improve the problem of poor self-learning ability of the anti-money laundering and anti-fraud system.

2.1.5. New opportunities for commercial banks' retail payment business

2.1.5.1. Central bank digital currency helps break the monopoly of mobile payment market and reshape the payment ecological pattern

In recent years, the Internet giants have occupied the payment entrance by virtue of their scenes and traffic advantages, and created a "closed ecology" and "private domain traffic" through extensive investment in various headline vertical companies, with market segmentation and payment barriers between them. As a legal tender, the central

bank's digital currency can break the technical barriers and commercial restrictions, dismantle the monopoly of platforms and data, and establish a new payment system that is inclusive and universal.[11]

2.1.5.2. The promotion of the central bank's digital currency will help further improve the retail payment product service system of commercial banks

The central bank's digital currency cuts into the payment portal, which will inevitably bring comprehensive changes to the payment product service system. On the one hand, the central bank's digital currency supports various forms such as visible cards, dual offline transactions and wearable devices, and has the advantages of large technical inclusiveness, high security and strong user identification, which further enhances the convenience, security and universality of payment and provides more possibilities for the optimization of rich retail payment products and services. On the other hand, the central bank's digital currency operation system based on "wallet + scenario" continues to be constructed and improved, which allows commercial banks to expand payment boundaries, innovate derivative products, and gradually cultivate usage habits and enhance user stickiness, thus attracting more payment traffic. The use of digital wallets by customers will also help banks analyze user transaction information and paint customer portraits with big data, which will continue to expand the universality and inclusiveness of payment services and bring comprehensive benefits to commercial banks in multiple aspects.

2.2. Central Bank Digital Currency Issuance Brings New Challenges to Commercial Banks

2.2.1. Challenges to traditional business models

First, the impact on offline channels. After the central bank's digital currency replaces M0 in large quantities, the cash business of offline outlets may gradually disappear, the traditional functions of ATMs and other cash machines and physical outlets will be weakened simultaneously, and the customer arrival rate will also continue to be low, and offline channels will see a sharp decline in personnel, scale and quantity, and the speed of financial disintermediation will accelerate, forcing commercial banks to accelerate channel transformation. The second is the reshaping of the payment system. The central bank's digital currency is digital cash, which is free from the bondage of bank accounts, has no need to bind bank cards, third-party institutions such as Alipay, no need for identity authentication, and can realize value transfer even in the offline state. [12]The central bank digital currency operation system will completely end the absolute advantage of third-party institutions in online small payment scenarios, break the barriers of each independent payment and settlement system among commercial banks, and maximize the efficiency of payment and settlement, but the traditional payment and settlement business of banks such as bank card transfer, card payment, merchant acquiring, international settlement and cross-border payment will be greatly impacted, and the emerging channel, the central bank digital currency wallet will replace traditional bank accounts and become a new battlefield for commercial banks' digital competition.

2.2.2. The promotion of central bank digital currency will intensify the competition among commercial banks

For commercial banks, the new technology, new scenarios and new business brought

by the central bank's digital currency may bring huge challenges and uncertainties to the banks' existing operation models. Since the central bank is only responsible for setting industry standards for digital currencies and digital wallets, operational data and services are still handed over to operators such as the five state-owned banks, UnionPay and the three major telecommunication companies. Therefore, there will be a certain homogenization of digital wallets or service scenarios developed independently by commercial banks and related financial institutions, which will also inevitably intensify the competition between commercial banks, commercial banks and third-party operators. [13] Commercial banks need to develop digital currency wallets that meet the requirements of the central bank as early as possible to seize market opportunities and continuously optimize their products and technologies to attract different customer groups.

Commercial banks with low technology levels are at a disadvantage, and more customers are attracted to operators with good technology experience. Large commercial banks have considerable competitive strength in terms of capital, technology and talent reserves. With the expansion and full rollout of the central bank's digital currency pilot, large banks that regain control of the payment portal can completely reorganize the digital transformation path and expand more digital business scenarios from their own strategic considerations, but they need to face the uncertainty of huge investment and the lack of application scenarios. The digital transformation pain points faced by small and medium-sized banks are comprehensive, from strategy to organization, from talent to awareness, and from the capital to technology. Small and medium-sized banks are struggling to take a step forward in digital transformation. In addition to the factors of channels, scenarios, data usage, product development and infrastructure construction, the importance of digital capability in the competition of commercial banks has increased significantly. Facing this uncertainty, commercial banks are in urgent need of technology and scenario empowerment from the outside to get more certainty while innovating and changing themselves. [14]

2.2.3. Central bank digital currencies bring pressure certainty to the financial infrastructure of commercial banks.

In the context of the deep application of blockchain technology, especially the central bank digital currency, DC/EP will have a significant impact on the traditional financial infrastructure, which will directly affect the business operation of commercial banks. Currently, China's central bank digital currency (DC/EP) adheres to the principle of technology neutrality and insists on adopting centralized database ledger technology, fully drawing on the concept of decentralized blockchain technology, deciding that to overcome its technical loopholes, it is necessary to strengthen the technical construction in all aspects of its issuance, the transaction as well as use, especially on payment terminals, which can draw on the mature experience of existing third-party payments to ensure the storage and The security and stability of payments. The information interface between the central bank, commercial banks, and financial institutions also require a perfect data transmission infrastructure to achieve system compatibility in all aspects of the circulation of the central bank's digital currency [15]. However, in the face of the rapid development of the central bank's digital currency, commercial banks are still lacking in the construction of financial infrastructure to interface with the central bank's digital currency.

2.2.4. The form of risk prevention and control has changed.

As a comprehensive product of the new era and new technology, the digital currency has a profound impact on monetary development. The risk management system built around traditional physical currencies can no longer meet the changes in business scenarios after the emergence of digital currencies, and it is a new challenge for commercial banks to keep pace with the times and improve the construction of bank risk control systems. Digital currency belongs to data information, and how to balance convenience and privacy protection becomes a key issue to be considered. After the scale of digital currency use gradually expands, the system's carrying capacity and security will be tested. Secondly, digital currencies have broadened the transaction scenarios and settlement methods, which also provide opportunities for money laundering crimes. In the face of endless money laundering methods, digital currencies also need to construct a good anti-money laundering prevention and control defense line. The traditional business of exchange, custody and storage of digital currencies should also be prevented and controlled. [16]When opening a digital wallet account, how to prevent impersonation and forged documents from opening an account is also an issue that commercial banks need to consider.

3. Suggested countermeasure considerations for commercial banks in response to central bank digital currency issuance.

3.1. Adjusting business model

As digital currencies continue to be promoted, the traditional transaction and cash access functions of the physical branches of commercial banks will also be weakened to a certain extent. Therefore, commercial banks need to consider the scale of branches, customer quality and business quantity, rearrange the location of branches, reduce the investment of equipment and personnel related to cash business, and increase the investment of publicity and equipment related to digital wallets; reduce the number of personnel related to cash business, and increase the introduction of big data, block chain, data analysis and other personnel, and finally complete the transformation of branches from "business processing" to "marketing service". In the end, the branch will be transformed from a "business processing type" to a "marketing service type". [17]

At present, it is the trend for commercial banks to rely on digitalization to achieve accurate marketing and intelligent risk control. The continuous promotion of digital RMB will also create a new business model for the development of digital economy. Under such a trend, commercial banks should focus on retail, education, cross-border payment, transportation, and healthcare as pilot scenarios for digital RMB, and use them to increase customer traffic and volume and accelerate their transformation into open banks; second, they should actively grasp the development trend of the digital economy and focus on blockchain, third-party payment, and other financial technology fields that may be used as scenarios for digital RMB in the future. Thirdly, the bank should take advantage of the trend of retail transformation and launch digital RMB-based loans and wealth management products to create a full range of services and further promote the digital transformation of retail finance; fourthly, the bank should take the opportunity to upgrade the digitalization of financial services and promote inclusive financial loans based on the central bank's digital currency by using the digital currency forward-looking

condition trigger mechanism to promote the precise drip-feeding of inclusive financial services and improve service quality and efficiency. Fourthly, we will use the digital currency forward-looking conditions trigger mechanism to promote inclusive financial loans based on the central bank's digital currency, promote accurate drip-feeding of inclusive financial services and improve service quality and efficiency.

3.2. Strengthen cooperation among the banking industry to take advantage of scale and avoid vicious competition.

The central bank's digital currency issuance adopts a two-tier operation model of "central bank-commercial bank", which is aimed at maximizing the enthusiasm of commercial banks and making full use of their existing resources. The development and operation of the central bank's digital currency place higher demands on the security, stability and computing capacity of the existing financial infrastructure of commercial banks. The renovation and upgrading of financial infrastructure, preliminary equipment renovation and later maintenance require investment from commercial banks.[18]Therefore, on top of establishing a unified standard for the operation of the central bank digital currency, banks must focus on communication and collaboration to jointly develop and use the operating system of the central bank digital currency. Strengthening the collaboration and communication among banks, firstly, helps to bring into play the scale advantage of commercial banks, form the network effect of payment and settlement system among commercial banks, reduce the cost of commercial hardware renovation and maintenance, and also helps the promotion of the central bank digital currency; secondly, it can effectively avoid the central bank digital currency system from being attacked by external networks.

3.3. Strengthen the financial infrastructure of commercial banks

In the context of the difficulty of applying the new central bank digital currency to today's commercial bank information system, commercial banks need to actively respond by laying out the relevant infrastructure construction of the central bank digital currency in advance, coordinating the issuance, circulation and payment system of the central bank digital currency, and making sufficient and perfect preparations for the upcoming issuance and circulation of the central bank digital currency, including but not limited to the preliminary work of technology research and development, staffing and network distribution.

Specifically, with the digital banking project, commercial banks can focus on investing in block chain technology talents and capital to achieve a comprehensive transformation of their traditional information systems, aiming to upgrade and update their information systems to a new system adapted to the central bank's digital currency and actively promote the construction of the financial infrastructure of commercial banks. On the other hand, with the in-depth application of the central bank's digital currency, users' transaction habits and behavior patterns may change substantially. Commercial banks need to actively invest in the supporting research of the central bank's digital currency, deeply analyze the possible impact of the use of the central bank's digital currency on the existing business models of commercial banks, increase the investment in the research and development of information systems, and respond to the existing operation models of commercial banks. We will actively build online digital platforms for commercial banks, so as to seek digital competitive advantages under the threshold of the central

bank's digital currency, thus bringing better user experience and minimizing operational impacts.

3.4. Improve the overall level of risk prevention and control

3.4.1. Improve the relevant laws and regulations.

At present, China does not have a complete set of laws and regulations on digital currencies, so it should improve the relevant regulations, formulate a series of regulations on the issuance, circulation and use of digital currencies, clarify the legal status of digital currencies, so that the use of digital currencies in various scenarios can be based on the law, so that commercial banks can have a law to follow when carrying out digital currency business and supervision.

3.4.2. Develop technical systems, security standards for digital currencies.

As an agent issuer of digital currencies, commercial banks should work together to reach a consensus on the security protection of digital currencies, discover potential vulnerabilities of digital currencies as far as possible and make up for them in a timely manner, enhance the technological content of digital currency security protection and ensure the safe and stable circulation of digital currencies.[19]

3.4.3. Reinforcing dynamic regulation.

For the new business of digital currency exchange and financial management, commercial banks should have sufficient foresight to develop dynamic monitoring mechanisms based on the experience of traditional currency business and the new characteristics of digital currency, so that they can be informed of the risks of digital currency and deal with them in a timely manner, so that they can quickly resolve the risks once they occur, reduce the transfer and spread of risks and ensure the overall financial system. Stability.

4. Conclusion

The continuous development of digital currency is an inevitable trend, and commercial banks should recognize this trend. Recognizing the inevitability of this trend, commercial banks should strengthen the cooperation with the central bank, peers and payment platforms. cooperation, fully utilize their sufficient business experience and long-term technical reserve, the They should make full use of their sufficient business experience and long-term technical reserve, mature infrastructure, rich system architecture, and extensive engagement in the development and use of digital currency. We will strengthen our theoretical understanding, optimize the business model, actively explore the practice, and consolidate our market position for the development and use of digital currency. We will strengthen our theoretical understanding, optimize our business model, actively explore and practice, and consolidate our market position, so as to further enhance the operational efficiency of commercial banks under the trend of digital currency development. The company will provide more and better financial services for the real economy and the people. We will provide more and better financial services for the real economy and the people.

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