

## **LEGAL FRAMEWORKS FOR IMPLEMENTING LEGAL DIGITAL CURRENCY: A COMPARATIVE STUDY**

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**Abstract:** The evolution of money has been marked by constant change, adapting in response to the evolving needs of society. Beginning with the use of seashells as a rudimentary form of currency, it became apparent that seashells' limited availability hindered their widespread use. Consequently, national unified systems of metal and paper money gradually emerged to facilitate economic transactions. In the present day, driven by increasing wealth and propelled by advancements in blockchain, cryptography, and related technologies, digital currency has gained prominence as a solution to transcend the constraints of physical currency. This shift has prompted various nations, including China, to delve into the realm of digital currencies, envisioning a future where legal digital currencies replace traditional cash, offering cost-saving benefits. China has been at the forefront of this movement, initiating research on legal digital currency in 2014 and establishing the Central Bank Digital Currency Research Institute in 2017. Subsequent pilot programs in regions like Xiongan, Suzhou, Chengdu, and Shenzhen paved the way for broader implementation, with additional pilot areas like Shanghai, Changsha, Hainan, Xi'an, Dalian, and Qingdao joining the effort. The People's Bank of China has also proposed revisions to the "Law of the People's Bank of China," providing a legal framework for the future adoption of legal digital currency. Moreover, international counterparts, including Russia, Sweden, and Venezuela, have embarked on their own journeys toward legal digital currencies, each driven by unique motivations and strategies to harness the potential of digital currency in modern payment systems.

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**Keywords:** digital currency, legal digital currency, Central Bank Digital Currency, payment methods, financial innovation.

### **Introduction**

The form of money changes constantly with the development of society. At the beginning, people used seashells as the general equivalent. Seashells are the initial form of money, but the number of seashells is small and it is not convenient to spread widely. Therefore, in order to meet the needs of social economy, national unified metal money and paper money gradually appear. Now, people's wealth is increasing, the demand for currency is increasing, and with the progress of blockchain, cryptography and other technologies, people begin to study digital currency to get rid of the shackles of physical currency, to meet people's life and social economic needs. In this context, some countries begin to study digital currency, by issuing legal digital currency instead of cash, saving costs. <sup>[1]</sup> China began to study legal digital currency in 2014, and set up the Central Bank Digital Currency Research Institute in June 2017. In April 2020, China tested in four pilot areas: Xiongan, Suzhou, Chengdu and Shenzhen. So far, six pilot areas including Shanghai, Changsha, Hainan, Xi 'an, Dalian and Qingdao have been added, and the application scenarios are gradually enriched. The People's Bank of China announced the "Law of

the People's Bank of China (Draft Revision for Comment)", which will lay the legal foundation for the future introduction of legal digital currency in China.

Some foreign countries are also actively studying the legal digital currency. The central bank of Russia believes that digital currency will become the main method of payment in the future, has conducted a lot of theoretical research, carried out relevant experiments in the country, and said that it will issue Russian legal digital currency in the future. Sweden's Riksbank announced its "e-Krona" project in 2017 and tested it in the country in 2020. Sweden said the main reason for issuing the e-Krona was that the use of cash was declining and Sweden needed a new alternative to cash to play a role in the payments market. Venezuela issued the "petro" in 2018, and stipulated that the petro needs physical collateral, one petro for each barrel of Venezuelan crude oil, and the Venezuelan government hopes that the petro can be used for international payments in the future.

In addition, Uruguay's "e-Peso" project, Canada's "Jasper" project and Singapore's "Ubin" project are all studying fiat digital currencies. From the above countries, it can be seen that they attach great importance to legal digital currency, and it can also be seen that legal digital currency has become a hot spot in the current currency research.

## 1. The definition of legal digital currency

### 1.1 Definition of legal digital currency

Legal digital currency refers to legal currency in the form of electromagnetic symbols. The currency issued by the state or region for circulation in accordance with laws and regulations has unlimited legal compensation capacity and is endorsed by the state on credit. China's law clearly stipulates that the national legal currency is RMB, and China's legal digital currency is digital RMB. <sup>[2]</sup>

### 1.2 Comparison of legal digital currency with other currencies

#### 1.2.1 A comparison of fiat digital currencies with physical currencies

First of all, legal digital currency can greatly reduce costs and save resources. At present, the currency issued in China is paper money and coins, which not only costs a lot of natural resources to produce, but also a lot of human, material and financial resources to circulation and management. Whether it is banknotes or coins, in order to make them convenient for circulation in society and have anti-counterfeiting function, they need to have unique technology. Therefore, they need to go through more than a dozen processes. But digital currency can be created by computer programming, eliminating the use of natural resources, cutting down on these processes, and greatly reducing the cost of manufacturing and distribution. In circulation, it also eliminates the cost of transportation and protection of currency. In addition, the physical currency will be worn and even destroyed in the process of circulation and use, so its use is time-consuming. However, the digital currency is essentially an electromagnetic symbol without a physical carrier, there is no damage when it is used. So there is no need to consider the problem of service life, which can not only save the cost of cleaning and disinfecting cash and coins, it also saves the cost of dealing with used cash and coins.

Secondly, legal digital currency is more secure. Although countries around the world have adopted a variety of technologies to prevent criminals from counterfeiting and altering their own currencies, due to the inherent properties of physical currencies, counterfeiters can crack these anti-counterfeiting technologies, so these technologies cannot completely eliminate such crimes and crimes, so that there are still many fake currencies in circulation in society. And the recovery and destruction of these counterfeit money that has been in circulation is a great difficulty for investigators. The digital currency issued by the central bank not only uses cryptography to improve its security because its digital properties make it impossible for holders to easily change or illegally use it during transactions. Moreover, the holder must have his own digital wallet to store the digital currency, so every holder is real-name in the background, so that the central bank can easily track the flow of funds and timely detect various criminal acts against the digital currency, so as to effectively prevent crimes.

Last but not least, it is conducive to regulation. Under the traditional monetary system, the supervision of cash in circulation is extremely difficult, the transaction of cash is completely anonymous, and it is impossible to trace its specific circulation path. However, the transaction of digital currency is the transmission of data, and the data

can be recorded completely and accurately in the system and can be easily retrieved, and it is relatively simple to carry out statistical detection in the database established by the central bank. Therefore, the supervision of legal digital currency is easier than that of cash. <sup>[3]</sup> Moreover, the central bank can adopt controllable anonymous measures. At the first layer, the user needs to have a real name when setting up a digital wallet and establishing a connection with the banking system. The user's information is stored in the database established by the central bank. At the second level, the transactions between users are anonymous. In this way, the central bank can fully check the direction of each legal digital currency in the background, thus improving the efficiency of supervision. In addition, the amount of legal digital currency circulating in the market can also be calculated, and the corresponding regulatory policies can be adjusted in real time according to the data.

### ***1.2.2 Comparison of legal digital currency with deposit currency and electronic currency***

Legal digital currency belongs to cash in circulation, not deposits in banks or other financial institutions by depositors, so financial institutions cannot use the legal digital currency in users' digital wallets for lending or investment. Under traditional circumstances, financial institutions can use depositors' deposits for various financial activities. Therefore, although deposit currency will bring interest returns to depositors. <sup>[4]</sup> At the same time, it also bears the credit risk caused by the collapse of financial institutions, while the legal digital currency is endorsed by the national credit and belongs to cash, which will not bring interest income to the holder, nor will it face credit risk.

Electronic currency is essentially deposit currency, representing the credit of commercial banks or payment institutions. Users have the right to refuse to accept the deposit currency paid by the other party when trading. Therefore, the legal compensation of electronic currency is limited. And the legal digital currency represents the national credit, equivalent to cash in circulation, so its legal compensation is unlimited.

The legal digital currency improves the efficiency of payment and settlement. China has China Bank Card Association (UnionPay for short), which will transfer, clear and arrange when we use bank cards to engage in inter-bank and cross-border business. According to the bank card payment system, we complete payment by swiping the card or scanning the code. Although we feel that this kind of payment is extremely fast, in fact, funds go through a more complicated process. The flow direction of funds is roughly: payer -- payer card issuing bank -- China UnionPay -- payee card issuing bank -- payee. This is a "single offline" mode, which is also adopted by third-party payment platforms. They cannot complete the payment in the state of no network. However, the central bank digital currency will adopt the "double offline" mode, which can still complete the payment in the state of no network or weak network, and will not be limited by network signals. In addition, intermediate procedures are omitted, the original three-party payment mode has been changed into a two-party mode without relying on intermediaries. It greatly improves the operation efficiency of the whole payment and clearing system. <sup>[5]</sup>

The use of legal digital currency should be free. People do not pay the central bank service fee when using the fiat currency, because it is the obligation of the state to provide the public with the currency stipulated by the law, which is a basic service provided by the state, so we have never paid any fee for using the physical RMB. The legal attributes of legal digital currency and legal entity currency are the same, so users should not pay any fees when using legal digital currency. Commercial banks should not charge the holders of legal digital currency for the fees incurred in the operation of circulating legal digital currency business, and they can apply for certain subsidies from the central bank. <sup>[6]</sup> Compared with the legal digital currency, the use of electronic currency needs to charge users because the payment and settlement services of electronic currency are provided by commercial institutions, and the users have been informed before the provision of these services that they are paid, and the users have also agreed to this, so the use of electronic currency needs to pay fees.

### ***1.2.3 A comparison of fiat digital currencies to private digital currencies***

A legal digital currency is issued by a national central bank, and its issued face value should be equivalent to the physical RMB currently in circulation. The purpose of issuing legal digital currency is to replace cash for settlement, so there is no need to design a denomination value or a currency unit of account separately. At present,

the price of Bitcoin, the most popular private digital currency, has exceeded 50,000 USD/piece, which is completely the result of market operation. The value of this currency is extremely unstable, because it only represents the credit of the issuer, while the value of legal digital currency is clearly stipulated by law and has the nature of currency stability, which will not be disturbed by the market. There is no possibility of capital operation, which is conducive to the stability of social economy.

Table 1: Comparison of cash, electronic money and legal digital currency

	Issuing institution	Interest	Credit guarantee	Digital form	Unlimited legal indemnity	Anonymous
Cash	Central bank	no	National credit	no	Yes	yes
e-money	Commercial banks	yes	Commercial bank credit	yes	no	no
legal digital currency	Central bank	no	National credit	yes	yes	yes

**2. Legal issues facing the full implementation of legal digital currency in China**

At present, the research on the legal digital currency in the world is in full swing. The digital currency has a huge advantage over the physical currency in terms of manufacturing, circulation and supervision, but many problems have been found in the research process. The following will introduce some legal problems encountered in the implementation of legal digital currency in our country:

**2.1 The lack of legal basis**

At present, China's research on legal digital currency is in full force, and has been tested in many regions, it can be predicted that China will fully issue legal digital currency in the near future. Issuing fiat currency is a concrete manifestation of the state's exercise of sovereignty. The state has the right to decide the main and auxiliary coins of the issued currency, as well as the face value, quantity and issuance and circulation procedures of the currency according to economic needs and legal provisions. Issuing currency is the exercise of public power, which must be in accordance with the principle of "not allowed by law", otherwise it is an illegal act. However, the laws and regulations related to currency issuance in our country mainly include the Law of the People's Bank of China, the Regulations on RMB Management and other legal documents. The law clearly stipulates that the main body with the power to issue currency is the People's Bank of China. In addition, these laws also stipulate that the current legal tender in circulation in China is the RMB, which includes banknotes and coins, and digital currency is obviously not included. Secondly, the laws and regulations also make it clear that the RMB is uniformly produced by the People's Bank of China, while the digital currency is an electromagnetic symbol created by computer technology. There is no physical carrier, and there is no "printing" procedure. To sum up, the current laws and regulations cannot be the legal basis for the manufacture, issuance and circulation of legal digital currency. As the alternative form of legal notes, legal digital currency should have the same legal status with our country entity RMB. Therefore, if our country is to issue legal digital currency in a full way, we must first revise the relevant laws and regulations to meet the conditions of legality of issuance.

**2.2 The provisions of legal compensation are not clear**

The legal compensation of currency means that a country's legal tender can be used for all domestic clearing and payment operations. The legal currency of China is RMB. The law stipulates the unlimited legal compensation of RMB, and no individual or unit can refuse to accept RMB. The main reason why private digital currency Bitcoin cannot be circulated in China is that Chinese law does not give Bitcoin legal compensation, so Bitcoin cannot be used for domestic settlement business. The legal status of the legal digital currency issued by the central bank is consistent with that of the RMB being issued and circulated, so the legal digital currency is also the

manifestation of the RMB. However, because the current law does not make clear provisions on the legal compensation of the legal digital currency, if the legal digital currency is issued according to the current provisions, it is not difficult to foresee that people will be rejected when using the legal digital currency for settlement business in the future. This will greatly undermine the authority of legal digital currency in our country and cannot achieve the purpose of issuing legal digital currency at the same time. Therefore, before the full issuance of legal digital currency in circulation, it is necessary to clearly stipulate its legal compensation. In addition, digital currency is different from physical currency, it needs special technical means to be able to use, the use of digital currency is a certain basic conditions, then, in practice, there may be because of equipment or some other special circumstances and unable to use legal digital currency.<sup>[7]</sup> Therefore, China should officially issue legal digital currency nationwide, in addition to clearly stipulating its legal compensation in laws and regulations, but also take into account the situation that legal digital currency cannot be accepted due to objective circumstances.

### **2.3 *Personal information is easy to leak***

When using physical currency, people should pay attention to the personal information they leave when opening an account in a commercial bank and conducting transactions. The process of issuing and circulating currency by the central bank has nothing to do with the user, and it will not involve the security of personal information. Relatively speaking, it is rare to have personal information security problems when using real currency. And China has also introduced a series of laws to protect the privacy of currency users.

However, digital currency is created based on computer technology and generated by writing computer code. Its ownership is mainly based on identity information code and private key. The form of transaction is data transmission. Such a transaction structure greatly increases the possibility of users' personal information disclosure.<sup>[8]</sup> According to the current cases of various digital currency accounts such as the bitcoin holder account being attacked, because the digital currency account contains a lot of wealth, it is easy to become the target of hackers. Once it is successfully invaded, the holder will face huge property losses. Therefore, our country should pay great attention to protecting users' personal information before issuing legal digital currency.

Secondly, not only will hackers attack digital currency accounts, but in the current era of popular network payment, payment platforms such as Alipay, WeChat Pay and UnionPay will take advantage of their convenient position to collect users' information arbitrarily. In particular, third-party payment platforms set up by commercial companies collect a large amount of users' information when they use them, and share it in all the company's software. For example, when we search for an item in the browser and open the shopping platform belonging to the same company, we will find that the item we just searched or similar items are recommended on the home page of the shopping platform. This phenomenon will undoubtedly make users worry about the security of their personal information. At present, China has issued some laws for Internet transactions to protect users' personal information, such as the "Network Security Law" and the "Civil Code", but these laws only regulate the behavior of information collectors, but do not stipulate the mechanism for the collection of personal information self-protection. To sum up, the issuance, circulation and use of legal digital currency will inevitably bring many personal information security problems, China should pay special attention to this aspect, so as to ensure the normal issuance and use of legal digital currency.

### **2.4 *The anti-money laundering system is not perfect***

At present, China has a relatively complete anti-money laundering system, which takes China's Anti-Money Laundering Law and Regulations on Anti-Money Laundering for Financial Institutions as the legal basis, and the People's Bank of China as the leading anti-money laundering department in China. Financial institutions and specific non-financial institutions perform anti-money laundering obligations, such as customer identification, suspicious transaction reporting, transaction record keeping, etc. In addition, the China Anti-Money Laundering Monitoring and Analysis Center completes the task of transaction monitoring and analysis.<sup>[9]</sup> However, after the

central bank issued legal digital currency, the existing anti-money laundering system will not be able to complete the anti-money laundering work for legal digital currency.

First, at present, China is led by the central bank in anti-money laundering work, and the main task is completed by financial institutions and specific non-financial institutions. However, the use of legal digital currency does not need to go through financial institutions, and point-to-point transactions such as near field communication are used, which causes the existing regulatory bodies to fail to complete the task of anti-money laundering. And the central bank, which is responsible for issuing, circulating and recording, is not the main body to complete the anti-money laundering task, which makes the main body that is easiest to supervise the legal digital currency unable to obtain the right to direct supervision in law.<sup>[10]</sup> Second, anti-money laundering technology needs to be upgraded. Legal digital currency can be paid offline through peer-to-peer means, without the help of the network. It is the product of scientific and technological progress and development, so the means of supervision should also be improved. The central bank is the main body of the issuance of legal digital currency, in the background can detect the flow of these currencies, but the detection of offline transactions will have a certain time difference, during this period, criminals have the opportunity to complete money laundering, so to complete the task of anti-money laundering, we must upgrade the existing anti-money laundering technology and create a more advanced and strict anti-money laundering system.

### **3. Suggestions on improving our country's legal digital currency system**

#### **3.1 Clarify the legal basis of legal digital currency**

In the face of the problem of clarifying the legal basis of legal digital currency, the academic community has the following solutions.

Programme I, partial revision of laws and regulations related to the issuance and circulation of legal tender. Through this partial revision, the legal status, issuance method, legal compensation and other provisions of legal digital currency are added to meet the requirements of issuance. The advantage of this plan is that it does not need to consider the integrity of the legal system, but only makes some adjustments in general, and the legislative cycle is relatively short and controllable. However, the main disadvantage of this approach is that the main difference between digital currency and physical currency is that one is virtual and the other is substantive, so it is difficult to take into account some special situations in the issuance and circulation of legal digital currency.

Programme II, a special decision by the National People's Congress to announce the issuance of digital currency.<sup>[11]</sup> The advantage of this method is that it saves time and the NPC, as the highest power body in China, has a high level of legislation. The disadvantage is that such a special decision usually has less space and cannot make detailed regulations on specific issues.

Programme III, specifically formulate a legal Digital Currency Law, the formulation of a single law can make comprehensive and detailed provisions for various situations in circulation and use of legal digital currency, which can provide the most perfect legal protection.<sup>[12]</sup> However, the development of a new and complete legal procedure is complicated and will take a long time, which may delay the progress of the full implementation of legal digital currency in our country.

Whether it is amending the existing relevant laws, issuing special decisions, or formulating new laws and regulations, it can be regarded as the process of perfecting China's monetary legal system. The existing laws cannot be the legal basis for issuing legal digital currency, and the above three solutions have their own shortcomings and cannot be taken into account, so we should gradually improve the relevant laws and regulations. At present, China is revising the Law of the People's Bank of China, and has published the Law of the People's Republic of China on the People's Bank of China (Draft Revision for Comment). According to the provisions of the second paragraph of Article 19 of the Draft, the digital form has also become the manifestation of the RMB according to law. Moreover, China is currently not only testing in some cities, but also Hainan Province into the scope of the test. During the pilot process, the existing laws are appropriately amended in view of the problems that arise, and special decisions can also be issued at the same time to ensure that the legal digital currency can

operate normally in the pilot area, sum up experience, and gradually implement the legal digital currency to the whole country. After that, in order to ensure the soundness of China's monetary system and the stability of its operation, relevant laws and regulations can be integrated to compile a comprehensive and systematic "Currency Law" in line with China's national conditions. In this way, the full issuance of legal digital currency is carried out gradually, which does not slow down the issuance process, but also provides a complete legal basis for the issuance of legal digital currency.

### 3.2 *Clearly define the legal compensation of legal digital currency*

Regarding the legal compensation of legal digital currency, there are two opinions in the academic circle at present, the first is to stipulate the limited legal compensation of legal digital currency, and the second is to stipulate the unlimited legal compensation of legal digital currency.

The first point of view is that the legal digital currency should be limited legal compensation, and should not have the same legal compensation as the current RMB. These scholars believe that digital currency, as a currency generated based on computer technology, has its own limitations. For example, the use of digital currency requires stable equipment, whether it is the equipment built by the state to provide corresponding services, or the equipment used by the holder for storage and use, which will affect the use of digital currency in People's Daily life. If the unlimited legal compensation of digital currency is stipulated at the very beginning, and no one can refuse to receive RMB according to the current provisions of the Law of the People's Bank of China, then, when using legal digital currency, the behavior that cannot accept digital currency because of its own equipment problems is illegal, but it is deemed to be illegal and therefore punished. Obviously violates the principle of fairness and justice, so if the unlimited legal compensation of legal digital currency is stipulated, there will be similar problems. In addition, these scholars also put forward that when legal digital currency has unlimited legal compensation ability, some prudent bank depositors will convert their deposits into legal digital currency to avoid risks, which will reduce the loanable funds of commercial banks, which is not conducive to the development of the financial market. <sup>[13]</sup>

The second view is that legal digital currency should have unlimited legal compensation. Because the legal digital currency to be issued by the central bank is China's legal currency, it has the task of replacing the physical currency in circulation, and is one of the manifestations of RMB, so legally it should have the same unlimited legal compensation as the RMB in circulation. Moreover, under the background of the rapid development of science and technology and the basic popularization of intelligent life, people are more and more inclined to complete payment activities through intelligent terminals. For example, the third-party payment platforms such as Alipay and Fortune have penetrated into People's Daily life, and mobile payment has become the main means of payment for people. Therefore, the central bank's issuance of legal digital currency conforms to the trend of social development. If it only stipulates its limited legal compensation when issuing legal digital currency, it is not only detrimental to maintaining the authority of China's legal currency, but also detrimental to the development of society.

In order to maintain the authority of legal currency, legal digital currency should be provided with the same unlimited legal compensation as the current RMB. Secondly, as pointed out by some scholars, some depositors move their deposits to digital wallets, resulting in the decrease of loanable cash in commercial banks, but this is a normal and controllable phenomenon. Currently, the assets of commercial banks in China are in good condition, generally not causing credit risks, and legal digital currencies do not generate interest, while deposits stored in banks will bring benefits to depositors. Therefore, the author believes that only a small number of depositors transfer their deposits to digital wallets, which will not have a huge impact on commercial banks. In addition, for illegal acts caused by objective reasons such as equipment during the actual use of digital currency, the author agrees with Liu Xiangmin's view that special provisions can be issued to exempt users from penalties for such situations that are not caused by the subjective will of users, instead of setting an exception clause for legal compensation. <sup>[14]</sup> Such a practice not only preserves the dignity and authority of the legal digital currency as the

legal currency of our country, maintains the stability of our legislation, and can achieve the purpose of issuing legal digital currency.

### **3.3 Improve the protection mechanism of users' personal information**

As mentioned above, hacker attacks on digital currency accounts, payment platform preference collection and imperfect legal regulations on personal information protection are some of the problems. The author believes that these problems can be solved from the following aspects.

#### **3.3.1 Clarify the specific content of personal information**

Traditional personal information refers to all information related to the individual, such as name, identity, job, etc., for the purpose of using cash and the flow of cash does not belong to personal information, while the legal digital currency uses blockchain, distributed ledger and other technologies, in addition to the traditional personal identity information can be queried, but also can query the holder of each transaction of various information.<sup>[15]</sup> Therefore, first of all, the specific content of the user's personal information when using the legal digital currency should be clear. Only when this information is clear, can the applicable law give protection. Secondly, the main body and scope of the protection are clearly defined. The current work of protecting the personal information of users of legal digital currency in our country is responsible for the "three centers", which refers to the certification center, registration center and big data analysis center.<sup>[16]</sup> Therefore, it is necessary to clarify the legal status of the "three centers" and the responsibility of user privacy protection. In addition to the "three centers" and its authorized units, no institution or unit may privately inquire or disclose users' personal information. This practice greatly reduces the possibility of exposing users' personal information and can well protect users' personal information.

#### **3.3.2 Limit the collection of users' personal information by third-party payment institutions**

At present, the main reason why users worry about personal information being leaked is that third-party payment institutions wantonly collect personal information, so these institutions should be restricted. When the third-party institutions are involved in the legal digital currency, they should fully inform the users of the content and purpose of the information collected, obtain the consent of the users, and follow the principles of legality, justice and necessity in the collection and use of the information. Without the consent of the users, it is prohibited to disclose the users' personal information to any institution or individual in any way, and increase the punishment for the institutions that disclose the users' personal information. It shall not indirectly obtain the user's personal information by setting up additional transaction processes, or separately use technology to analyze the correlation between the digital RMB circulation information and the personal information in the institution.<sup>[17]</sup>

#### **3.3.3 Set up user active protection mechanism**

As mentioned above, there is no active protection mechanism for users' personal information in China. Therefore, technologies such as computers, blockchain and cryptography should be used to provide users with the choice to protect their personal information. Users can choose to hide sensitive information such as their transaction path and amount. Of course, according to the characteristics of controllable anonymity of legal digital currency, users can choose to hide such information at the front desk. However, in the central bank system, these information are real-name and recorded, which not only reduces the spread of personal information, but also strengthens the supervision of the central bank. It is conducive to the protection of personal information. In addition, it can also clarify the remedies for users who are infringed on personal information to strengthen protection.

### **3.4 Improve the legal digital currency anti-money laundering system**

#### **3.4.1 Improve anti-money laundering laws and regulations for legal digital currencies**

According to the existing laws and regulations, financial institutions and specific non-financial institutions are the subjects of anti-money laundering obligations, but digital currency transactions can bypass them and do not require the participation of financial institutions, so the existing anti-money laundering subjects cannot complete the task of anti-money laundering against legal digital currencies. By issuing legal digital currency, the central bank can find out the direction of digital currency. The author believes that the main body undertaking the specific



task of anti-money laundering should include the central bank, give full play to the role of "three centers", and effectively and comprehensively supervise the legal digital currency. In addition, it should also stipulate the mechanism for reporting suspected money laundering behaviors, as well as the handling mechanism of upper level institutions, and the punishment for favoritism and bending the law within the mechanism. A comprehensive and strict anti-money laundering system should be established.

#### 3.4.2 *Establish an information sharing platform*

Since the interaction between the use of legal digital currency is anonymous, it should be clear that the registration of legal digital currency users should be real-name, so as to ensure the effective control of cross-border financial activities by the central bank. <sup>[18]</sup> In addition, the central bank will establish an information sharing platform that can be connected with the public security law, tax authorities, customs authorities and other departments through corresponding technologies, strengthen communication and cooperation, improve the supervision of legal digital currency, share suspected anti-money laundering accounts, fund flow and other related information on the platform, and carry out strict supervision to effectively combat money laundering crimes. But at the same time, it is also necessary to take into account the security of users' personal information, set up relevant regulations, and make legal and effective use of such information.

#### 4. Conclusion

China began to study legal digital currency in 2014, and now it is in its seventh year. In 2020, the legal digital currency will be tested in four pilot areas - Suzhou, Shenzhen, Xiongan and Chengdu - and in 2021 in Hainan Province. The above information indicates that China's research on legal digital currency is gradually mature. However, if there are still many problems in the nationwide implementation of legal digital currency, in view of the problems that may occur in the issuance of legal digital currency, we should first, stipulate the basis for the issuance of legal digital currency; Second, clearly stipulate the legal compensation of the legal digital currency; Third, improve the user's personal information protection system from three aspects: clarifying the specific content of personal information, restricting the collection of user's personal information by third-party payment institutions, and establishing a user's active protection mechanism; Fourth, improve the anti-money laundering system from the two aspects of improving the relevant laws and regulations for legal digital currency and establishing an information sharing platform. It is hoped that while our country constantly innovates, pay attention to the problems brought by legal digital currency, strengthen regulatory awareness and ability to prevent risks, and launch the legal digital currency in our country as soon as possible, to contribute to the economic development of our country and provide valuable experience for the issuing of legal digital currency in the world.

#### References

- FAN Yifei. (2016) *Theoretical basis and architecture selection of Chinese legal digital currency*. *China Finance*, 17, 10-12.
- LI Jing. (2022) *Operation risk and legal regulation of legal digital currency issuance right*. *Academic Exchange*, 7, 40-54.
- LI Qingwei, XING Tonghui. (2022) *Discussion on Legal Digital Currency and Optimization of Modern Monetary Policy Framework*. *Journal of Shanghai University of Finance and Economics*, 6, 123-137.
- YANG Dong, CHEN Zheli. (2020) *Research on the Positioning and Characteristics of Legal digital currency*. *Journal of Renmin University of China*, 3, 108-121
- YAO Qian, TANG Yingwei. (2017) *Some Thoughts on Central Bank-issued Digital Currency*. *Journal of Financial Research*, 7, 78-85.

- LIU Shaojun. (2018) *Study on the Legal Principles and the Distribution of Rights and Duties of Legal Digital Currency*. *Journal of CUPL*, 3, 165-179+209.
- GUO Zepeng. (2021) *Study on the Issue of Central Bank Digital Currency as Legal Tender in China*. *On Economic Problems*, 6, 16-23.
- WU Jinwang, SHEN Rui, MA Lihua. (2021) *Analysis on the value and path of issuing legal digital currency in China*. *Zhejiang Academic Journal*, 2, 111-119.
- LIU Xiangmin. (2016) *Legal issues of central bank issuing digital currency*. *China Finance*, 17, 17-19.
- LIN Muxi, CAI Lingnan. (2022) *Anti-money Laundering Mechanism of e-CNY and Policy Suggestions*. *Journal of Hunan University of Science and Technology (Social Science Edition)*, 6, 58-64.
- ZHAO Guigang. (2020) *Operational mechanism and related legal issues of Chinese central bank digital currency*. *Contemporary Finance*, 10, 13-17.
- QIU Xun. (2017) *Digital currency issued by The People's Bank of China: paths, problems and countermeasures*. *Southwest Finance*, 3, 14-20.
- WANG Dingxiang, HE Yuepei. (2020) *Research on social governance mechanism of legal digital currency replacing cash currency*. *Financial Theory & Practice*, 11, 1-9.
- LIU Xiangmin. (2016) *Legal issues of central bank issuing digital currency*. *China Finance*, 17, 17-19.
- FENG Sixian, YANG Jing. (2020) *International Practice and Enlightenment of Central Bank Digital Currency Reform*, 5, 68-79.
- YAO Qian. (2017) *Understanding central bank digital currency: a systemic framework*. *Scientia Sinica (Informationis)*, 11, 1592-1600.
- KE Da. (2023) *Weighing Based on the Public and Private Interests: Protection of Personal Information on Central Bank Digital Currency in China*. *Nanjing Journal of Social Sciences*, 5, 80-93. [18] YUAN Zeng. (2021) *Legal status, function and supervision of legal digital currency*. *Oriental Law*, 3, 95-107.