

Research on the development of legal digital currency in the process of RMB internationalization

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ABSTRACT : *At the moment when the development of global private digital currency is unstoppable, countries are in full swing in the research and development of legal digital currency. After more than ten years of internationalization, RMB still has a lot of room for enhancement. However, while facing the problems such as imperfect infrastructure of domestic financial market, it also needs to deal with external obstacles such as traditional US dollar hegemony. The Digital Currency Electronic Payment (DCEP) planned to be issued by the Central Bank of China adopts a two-level operation system with controllable anonymity and programmability, which has a positive impact on the internationalization of RMB. This paper affirms the role of legal digital currency in promoting the internationalization of RMB, analyzes a series of challenges such as the possible contradiction or competitive relationship between DCEP and the US dollar system, the original paper currency and other digital currencies, and then puts forward corresponding countermeasures and suggestions, hoping that all countries can strengthen monetary and financial cooperation at home and abroad, then actively improve and innovate the current international payment and clearing system.*

KEYWORDS -Internationalization of RMB, Legal digital currency, Challenge, International co-operation

I. Introduction

With the development of economic globalization, trade globalization, production and investment globalization, finance and capital flow globalization and international economic rules globalization all reflect that the monetary status of various countries has a key impact on their overall economic development. Therefore, it is very important for China to promote the international development of people's currency. In January 2020, the People's Bank of China announced that it had completed the top-level design, functional research and development and other basic work of legal digital currency. At present, the digital currency of the Central Bank of China has also begun internal testing and pilot work in some cities. It is highly possible for the People's Bank of China to become the first central bank in the world to launch digital currency. The characteristics of legal digital currency play a certain role in improving the construction of RMB cross-border payment and settlement system, improving the international credibility of RMB and promoting RMB international transactions. Taking the process of RMB internationalization as the main background, this paper studies its role in the process of RMB internationalization through the analysis of the development of legal digital currency, analyzes the possible challenges in the current market development level and complex international environment, and puts forward development suggestions.

II. Development of legal digital currency

Legal digital currency is a kind of digital currency issued and recognized by a country and endorsed by the country's credit. Legal digital currency has the functions of value scale, means of circulation, means of payment and value storage. It has the same legal status and the same legal effect as the existing physical cash currency, and has unlimited legal compensation. Any domestic enterprise, shop or individual must accept the circulation of legal digital currency. At the same time, The use of legal digital currency should also comply with all existing regulations on cash management, anti-money laundering and anti-terrorism financing.

In order to deal with the increasingly significant threat of private digital currency to legal tender and seize the initiative in the international monetary field in the future, central banks of various countries have gradually participated in the research of legal tender. In 2019, the bank for International Settlements and the payment and market infrastructure Committee conducted a survey on the research status of legal digital currency in various countries. The central banks of 66 countries responded with the survey, covering 75% of the world's population and 90% of the world's economic output. The survey results show that 80% of countries such as Japan, Canada, the United States, Switzerland and Thailand are actively studying the issue of legal digital currency, of which 50% focus on conceptual research such as the delivery mode of legal digital currency and the impact of reconstructing the payment system on all aspects of the country, and 40% have shifted from conceptual research to testing or conceptual verification, The research progress of 10% of countries has reached the development of relevant pilot work, and the fever of legal digital currency is heating up.

As of mid-July 2020, at least 36 central banks have issued retail or wholesale businesses on legal digital currency. The research progress of legal digital currency by different central banks can be divided into four situations. At present, it is known that the architecture design method of all central banks for retail legal digital currency is to consider legal digital currency as the direct liability of the central bank, and most central banks prefer to designate intermediaries to provide relevant retail payment services to the public, while the central bank is only responsible for centralized bookkeeping of transactions and providing some technical support or maintaining wholesale transaction accounts, Only a few central banks consider providing retail payment services directly to the public by themselves.

The legal digital currency that the People's Bank of China plans to issue, namely DCEP, is located at MO, which is essentially a substitute for physical cash. In terms of operation mechanism, DCEP adopts a two-tier operation system of two-tier issuance, that is, it is first issued by the People's Bank of China to commercial banks or other designated institutions, and then distributed and exchanged to the public through these commercial banks or designated institutions. Therefore, it can not only make full use of the resources and technical advantages of commercial banks and other institutions, but also avoid "financial disintermediation". The emergence of such problems has caused serious shocks to the existing financial system. At the same time, the centralized ledger processing method is adopted without interest calculation and payment. The main application scenarios are small, retail and high-frequency payment ^[1].

III. The role of legal digital currency in promoting the internationalization of RMB

3.1 It will help to increase the share of RMB in the international payment system

The use share of a country's currency in international payment is an important symbol to measure its currency internationalization. According to swift, as of August 2020, the use of US dollar, euro, pound sterling, Japanese yen and RMB in international payments was 38.96%, 36.40%, 6.70%, 3.61% and 1.91% respectively. According to the data of the International Monetary Fund, about 58% of the foreign exchange reserves in US dollars and about 40% of the debts in US dollars are in financial markets all over the world. The above shows that the US dollar and the euro account for a large share in the international payment system. Due to the dependence of countries around the world on the international settlement system mastered by traditional developed countries, it is difficult to change the pattern of the existing international payment system without the influence of other factors ^[2]. At the same time, the exchange rate and value of RMB have always been relatively stable in recent years. With China's economic growth, the status of RMB has also been recognized by the international community. However, it can be seen from the data in the table that the share of RMB is only 1.91%, indicating that the competitiveness of RMB in international cooperation is low.

At the same time, on the one hand, due to the characteristics of legal digital currency endorsed by national sovereign credit, if it is popularized all over the world, it will greatly improve the share of China's currency in the international market. In recent years, China's economy has grown rapidly, its voice has been significantly enhanced internationally, and its international image with good credit has been widely recognized internationally. China's legal digital currency is guaranteed by national credit, and its currency value is stable. China's central bank provides 100% reserve and credit guarantee for DCEP, which has unlimited legal compensation (i.e. legal digital currency cannot be rejected), This security and stability can not only reduce the supervision cost of our government, but also reduce the risk of holding and using RMB in other countries, which lays a good foundation for the international use of DCEP. On the other hand, at present, China's digital currency R & D process is in a leading position in the world. The latest data show that about 10% of central banks around the world have developed pilot projects related to legal digital currency, 40% of central banks have developed from concept research to practice or concept verification, and 80% of central banks are conducting relevant research. China is the first country in the world to carry out the pilot of legal digital currency. The People's Bank of China has started the research on legal digital currency in 2014. By the end of 2019, the functional R & D and standard formulation of DCEP have been basically completed, and small-scale pilot projects have been carried out in Shenzhen, Chengdu, Suzhou, Xiong'an new area and other places in the second quarter of 2020. At present, China has distributed some digital wallets to the market, including more than 8000 for enterprises and more than 110000 for individuals. As of February 20, 2020, the survey shows that the Institute of Printing Science and technology of the central bank has applied for 22 patents and the Institute of digital currency of the central bank has applied for 65 patents. To sum up, in the future environment of the construction of the international digital currency system, China's research progress at the forefront will help China improve its voice in the international payment system.

If the legal figure RMB is finally issued, the cross-border issuance of RMB and other currencies based on the direct exchange rate inquiry mechanism can be realized through the RMB cross-border payment system. It is then applied and promoted by agencies such as WeChat, Alipay and cross-border commercial banks to promote the circulation of statutory DCEP globally. Due to the advantages of legal digital currency in payment, clearing and cross-border circulation, China has a favorable position in future international trade and cross-

border e-commerce transactions, so as to enhance the attraction of RMB to foreign users and enable more countries and regions to list RMB as settlement currency and savings currency. Therefore, through the reform of expanding the scope of use of legal DCEP in the world, improve the share of RMB in the new international payment system, finally make the legal DCEP form a certain path dependence in the international community, and gradually promote the internationalization of RMB.

3.2 Help maintain currency stability

If a country's currency wants to occupy an important position in the world, value stability is an important factor. When countries use a country's currency, they bear less risk of value fluctuation, which helps to accept it as a tool for national international settlement, investment and reserve assets. Exchange rate is an important indicator to measure the value of currency. In international trade, if a country chooses foreign currency as its payment and valuation currency, strong fluctuations will have a great impact on both sides of trade. Although the marketization of the exchange rate formation mechanism has improved since China's exchange rate reform in 2015, it has not solved the problem of RMB exchange rate fluctuation. On the contrary, due to the escalating trade frictions between China and the United States, the balance of payments and inflation differences, the RMB exchange rate fell sharply. In 2015, the RMB exchange rate against the US dollar was more than five times that in 2014, and even fell to the lowest level in a decade, which greatly limited the pace of RMB internationalization^[3]. However, as a new payment currency, legal digital currency is issued under the supervision of the central bank. The blockchain technology used can be traded directly in a "point-to-point" manner through the characteristics of decentralization, which will make it easier for the central bank to implement monitoring and management and overcome the impulse of monetization of fiscal deficit. It can also accurately adjust the monetary policy through timely monitoring to deal with the changes of different situations, so as to ensure the value of China's currency.

3.3 It is conducive to strengthening international cooperation on the rule of law

From the perspective of international law, an essential point to improve the international credibility of RMB is to strengthen international cooperation under the rule of law and connect with international rules, so as to promote the development of RMB internationalization. At present, the digital currency framework led by the central bank has been recognized by most countries, and countries all over the world pay attention to it. Based on this, the G20 financial stability Council submitted a special report to the G20 finance ministers and central bank governors in April 2019, which identified the names and responsibilities of 94 crypto asset regulators in 25 countries and 7 relevant international organizations. It also summarizes the research and risk assessment of encrypted assets such as digital currency in some major international economic organizations. Among them, China's Ministry of industry and information technology, the state Internet Information Office, the Ministry of public security, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission and the People's Bank of China are listed as encrypted asset regulators, and their respective responsibilities are defined. On October 12, 2020, the European Central Bank launched a public consultation on the digital euro, intended to assess its needs through the situation reflected by the public, and released the preliminary analysis results of the digital Euro public consultation on January 13, 2021. On that day, the president of the European Central Bank, Christine Lagarde, expressed the hope to launch the digital Euro within five years. The European Central Bank said it would release a comprehensive analysis report on the relevant results of the public consultation in the spring of 2021, which will serve as an important reference for the Council of the European Central Bank to deal with the digital euro project. If the ECB finally wishes, there will be an opportunity to exchange between the digital euro and the DCEP through the current exchange rate price, so as to finally accelerate the overseas circulation of the DCEP and help the internationalization of the RMB.

IV. Challenges faced by legal digital currency in the process of RMB internationalization

4.1 There is a contradiction between the legal digital currency and the existing dollar system

In the procedures of currency internationalization, the cross-border payment and circulation of sovereign currencies have the risk of causing disputes between international currencies. Legal digital currency may play a role in cross-border settlement in the process of RMB internationalization in the future, which will trigger the competition and game between RMB and the existing major currencies in circulation in the world, especially the US dollar. Legal digital currency realizes the function of international circulation means and payment means of RMB, which means crowding out or even replacing the US dollar to a certain extent, thus weakening the hegemonic dominance of the US dollar in the world. How to deal with the challenge of US dollar to the internationalization of DCEP will be the main challenge for the issuance and circulation of legal digital currency for a long time.

4.2 The relationship between legal digital currency and deposits and RMB banknotes needs to be balanced

From the existing form, the legal digital currency issued by the central bank is highly similar to the traditional currency, and the legal digital currency also has low risk and high security. Therefore, the circulation

of legal digital currency has a basic effect and substitution effect on the traditional credit currency. At present, in order to reduce the impact of legal digital currency on the existing financial system, it has been decided that legal digital currency will adopt a two-tier operation system consistent with the current currency operation system, but legal digital currency will have a great impact on some existing systems. The most likely situation is to cause great harm to the interests of commercial banks, that is, the deposits of commercial banks are likely to be transferred into legal digital currency, causing “deposit moving”. Therefore, it is very necessary to sort out the relationship between RMB notes, deposits and legal digital currency, which will help to establish the order of legal digital currency in circulation and prevent risks.

4.3 There is competition between legal digital currency and other digital currencies

Digital currency not only plays an important role in the economic field, but also an important means of international discourse of currency in the digital era. Contactless payment and digital payment have gradually become a very important means of settlement. In the future era of digital settlement, money will be considered generally equivalent and exclusive. Therefore, there will be a very fierce competition between legal digital currency and non-sovereign digital currency. However, this competition will bring many unnecessary risks, which will affect the current stability of the financial market. Therefore, balancing the relationship between other digital currencies and legal digital currencies is also a difficult problem to be solved^[4].

4.4 Legal digital currency needs to cultivate global partners

At the present stage, there is a very fierce competition in the issuance and use of legal digital currency among countries. China, the United States, France, Germany and other countries have successively put forward the plan of legal digital currency, and some countries have even completed some tests. In the future, as the application of legal digital currency affects the international financial system, it is necessary to rectify its impact through cooperation among various countries. However, due to the great differences in the policies and attitudes of various countries, there are great difficulties in the cooperation of legal digital currency among various countries. For example, some countries explicitly prohibit it, while others support it, while others wait and see. Therefore, this will be a very challenging task.

4.5 The technical realization and basic problems of legal digital currency still need to be broken through

From the technical point of view, although legal digital currency has many advantages and high technical feasibility, it can not meet the requirements of real-time data acquisition, monitoring and analysis under high-frequency transactions. These problems make it impossible to operate legal digital currency accurately and accurately. Moreover, there is an urgent need for breakthroughs in the top technology of legal basis preparation and application planning of legal digital currency.

V. Legal digital currency development proposal

5.1 Strengthening international cooperation

The first is to strengthen monetary and financial cooperation. Accelerate the construction of a trinity legal DCEP international payment and settlement system. The focus of promoting the internationalization of legal DCEP is to build an independent settlement system. We should build the financial infrastructure for the circulation of legal digital currency from the aspects of the issuance and circulation system, payment system and auxiliary supervision system of legal digital currency, and connect with the existing integration of RMB cross-border payment and settlement. At the same time, we should speed up the international settlement of legal digital currency by relying on commercial banks and relevant institutions operating abroad.

The issuance and circulation system shall ensure that the legal digital currency is unimpeded in all links such as lending, transfer and return at home and abroad. The settlement system must be able to mature the impact of cross-border UHF concurrent transactions, and take into account efficiency and stability. The matching regulatory system needs to be able to track the transaction process of legal digital currency and collect relevant information, so as to do a good job in risk prevention and control. The premise of these systems is to establish more perfect network facilities, deploy 5g as soon as possible, and finally build a trinity legal DCEP international payment and settlement system.

The second is to strengthen cooperation in international rules and the rule of law. We should improve international recognition of the cross-border use of RMB and legal digital currency. Actively participate in some international activities or joint projects, and encourage Internet financial enterprises to go to the world for market expansion or technical cooperation, so as to optimize the international financial environment for the internationalization of RMB and the development of legal digital currency^[5].

5.2 Actively participate in the development of the current international payment and clearing system

At present, the influence of legal digital currency on improving the cross-border circulation efficiency of RMB may exceed that of swift payment and clearing system. Through this advantage, relevant departments can actively expand cross-border business and strengthen the international use frequency of RMB, so as to expand its use scale. With the increase of the number of issues, the legal digital currency system will be gradually improved.

VI. Conclusion

This paper summarizes the legal digital currency, reviews the current situation of RMB internationalization, and answers the impact of legal digital currency on the process of RMB internationalization, that is, the development of legal digital currency plays a role in promoting RMB internationalization. At the same time, it analyzes the challenges faced by legal digital currency in this process, and puts forward relevant policy suggestions. Although China's international status has been continuously improved and the influence of RMB has been continuously strengthened in recent years, the internationalization of RMB still has a long way to go and needs time and opportunities as an important support. Throughout the blue ocean trend, legal digital currency has unlimited development potential and provides good opportunities for RMB internationalization. At the same time, we must pay attention to and solve a series of related risks and challenges, such as market risk and credit risk, and make legal digital currency play an important role in the process of RMB internationalization through the control and adjustment of relevant policies The role of “booster”.

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