

A Review of the Impact of Central Bank Digital Currency on Currency Internationalization

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ABSTRACT

With the deepening of the pilot of central bank digital currency (CBDC), research on digital currency at home and abroad is developing continuously. However, when it comes to the impact of CBDC on currency internationalization, there are still many differences in academic discussions on this issue. It is necessary to analyze the development and function of CBDC and summarize its influence on currency internationalization. This paper focuses on the influence of the digital currency of the Central bank on the internationalization of the renminbi (RMB). In general, CBDC can promote currency internationalization, but without sufficient pilot programs and supporting regulations, there are still many risks.

Keywords: CBDC; currency internationalization; RMB

1. INTRODUCTION

In the digital age of rapid technological development, the introduction of CBDC has received broad international attention, which is a new milestone in the history of currency development[1]. Renminbi (RMB) is China's central bank currency. CBDC could also be considered as a form of central bank money, open to the public and processed electronically. According to the Bank for International Settlements (2021), 86% are actively investigating the potential of CBDC, 60% are experimenting with CBDC technology, and 14% are deploying CBDC pilot projects [2]. But overall, as a new form of currency, there are few summaries and generalizations about the promotion of currency internationalization by CBDC. Since the technology of RMB digital currency is becoming increasingly mature, and the number of people who open RMB digital currency accounts is increasing, which lays a solid foundation for the internationalization of RMB, studying the relationship between CBDC and the RMB internationalization is meaningful. The innovation of this paper is to focus on the influence of CBDC on currency internationalization through literature research. This will help countries take political factors into account when considering the promotion of CBDC and contribute new solutions to the competition for national influence in the digital economy.

2. DEVELOPMENT AND CURRENT SITUATION OF CBDC IN CHINA

Broadly speaking, CBDC is a fiat currency of digital form proposed by the International Monetary Fund[3]. It has valuable characteristics and legal compensation. There is no digital currency issued officially at the national level currently.

When it comes to the development of CBDC in China, the People's Bank of China (PBOC) set up a special research team to conduct in-depth research on key technologies, the issuance and circulation environment, issuance and business operation framework, and legal issues of digital currency in 2014. Then, the PBOC held a seminar on digital currency, which made it clear that the central bank would issue digital currency as a long-term strategic goal in January 2016. A statement issued by the PBOC in November 2020 locates the digital RMB at M0, an interest-free retail commercial settlement center. On February 24, 2021, the Multilateral Central Bank Digital Currency Bridge Research Project (M-CBDC Bridge) was announced to be jointly launched by the Digital Currency Research Institute of the PBOC, the Central Bank of Thailand, the Hong Kong Monetary Authority and the Central Bank of the United Arab Emirates. This research aims to explore the application of central bank digital currency in cross-border payments. On 28 September 2021, the above-mentioned institutions

jointly released a report on the interim results of the M-CBDC Bridge. According to the report, the improved prototype will bring a variety of benefits to participating central banks, including the ability to manage the liquidity of their respective central banks' digital currencies, monitor the flow and balance of their issued central banks' digital currencies, improve transaction privacy, and automate some compliance functions. Compared with the current correspondent banking model, the prototype could greatly speed up cross-border payments and save costs. By December 31, 2021, the number of digital RMB pilot scenarios had exceeded 8,085,100, with a total of 261 million individual wallets opened and 87.565 billion yuan of transactions. On January 4, 2022, the digital RMB (pilot version) App was released on major Android App stores and the Apple AppStore [4].

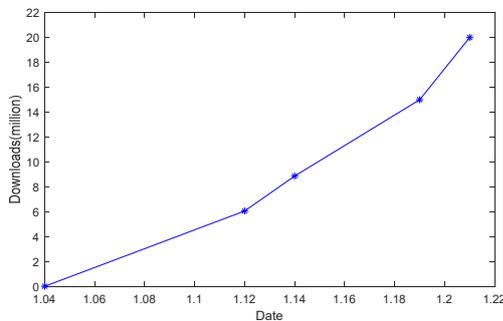


Figure 1. Number of digital RMB app downloads

According to the above information, CBDC has completed the cross-border use test and is steadily advancing into the daily use of people.

3. METHODS OF CURRENCY INTERNATIONALIZATION

RMB internationalization refers to the process in which the RMB becomes the international reserve currency and the main currency for international financial transactions and trade settlements[5]. Becoming an international currency requires meeting certain requirements. Tavlas summarized three conditions that international currency must meet: First, a stable political environment at home and abroad. Second, the financial market was deeply opened up. Third, exports account for a high proportion of the world. Currency internationalization first needs to meet a number of processes[6]. According to Kenen, first of all, all government restrictions on foreign and domestic entities trading currencies must be removed; Next, RMB should be able to be used by domestic firms to invoice part of their exports, while foreign firms should be able to invoice their exports; Second, RMB and RMB-denominated financial instruments should be able to be held by foreign entities. Then, Chinese entities should be able to issue RMB-denominated instruments in foreign markets; After that, international financial institutions

should be able to issue bonds in China and use RMB in their operations; Finally, the currency should be included in the basket of other countries and used as a reserve currency[7].

4. ANALYSIS OF THE BENEFITS OF CBDC FOR CURRENCY INTERNATIONALIZATION

Some of the benefits of CBDC for currency internationalization are summarized as follows. Firstly, the digitization of the RMB does help its internationalization from the perspective of transactions. The reason comes from the improvement of transaction efficiency. E-RMB facilitates the settlement of investment, trade, or cross-border payments in a cheaper, safer and faster way, changing the situation of long cycle and high cost of traditional cash settlement or bank transfer[8]. Secondly, in the international financial system, the launch of CBDC will narrow the relationship between countries and produce spillover effects, bringing first-mover advantages to the countries that early launched CBDC. Ferrari et al. constructed a DSGE model of CBDC usage between two countries and analyzed the economic impact of retail CBDC under the condition of opening[9]. They point out that CBDC brings countries closer together financially, but at the same time expands the international spillover effects of economic fluctuations. This means that the early launch of CBDC may bring a certain first-mover advantage to the country, but it may also aggravate the asymmetry of the international monetary system. To take advantage of the first-mover, launching CBDC early is necessary. Chorzempa once stated that the most important way in which a first-mover advantage in CBDCs may manifest itself is through currency competition, in which the digital RMB could facilitates internationalization of the RMB at the Dollar's expense[10]. In addition, PBOC officials have suggested that the digital RMB will help improve internationalization[11]. In the long run, the widely used CBDC will bring strong network externalities, so it may accelerate the transformation of reserve currency status[12]. Thirdly, from the strategic choice of maintaining monetary sovereignty, CBDC offers an opportunity to catch up on the curve to promote the internationalization of the RMB. China can independently research and develop a cross-border payment and settlement system using the digital RMB, which will enhance China's voice in fintech regulation, international standards and international payment systems[13].

The above discussion allows us to agree that the promotion of CBDC with first-mover advantage is conducive to currency internationalization, no matter from the national level or individual level.

5. ANALYSIS OF THE DISADVANTAGES OF CBDC FOR CURRENCY INTERNATIONALIZATION

Although many people agree that CBDC will help internationalise currencies, there are also disadvantages of CBDC for currency internationalization. Firstly, the presence of CBDCs in both countries may not give the currency at a relative disadvantage an opportunity to internationalize. From the perspective of the international financial system, the RMB is hardly comparable to the dollar in international settlement and payments[14]. Secondly, CBDC requires countries to have corresponding monetary policy support. If the capital account is not open, it is unlikely to realize currency internationalization. China has prioritized domestic capital controls and financial stability in capital account opening since 2015. In doing so, policymakers have chosen not to make the RMB more freely usable abroad, even though this policy choice meant a slowdown and even temporarily a reversal in RMB internationalization. So far, there is no sign that the PBOC will relax these capital controls for the digital RMB, though that could change[10]. Thirdly, the fierce international currency sovereignty war caused by the use of CBDC may restrict the international use of a country's CBDC, thus reducing its currency internationalization. The issuance and cross-border use of CBDC may lead to competition or even conflict with the sovereign currencies of other countries. CBDC of strong countries may threaten and replace the currencies of weak countries, which will seriously damage the monetary policy sovereignty of weak countries and even bring political risks between the two countries[15].

To be brief, CBDC is a tool for RMB internationalization, but there are still many obstacles and problems in the process of RMB internationalization, which need to be considered as a series of chain reactions.

6. CONCLUSIONS

The research topic of this paper is to summarize the advantages and disadvantages of currency internationalization by CBDC. The advantages include: CBDC accelerates the speed of international transactions; CBDC will narrow the relationship between countries and produce spillover effects; and CBDC provides the opportunity to create a new payment system to overtake. The disadvantages include: when both countries have CBDCs, the CBDC of the inferior country in currency status may not have the opportunity of internationalization; the help of CBDC for currency internationalization needs corresponding monetary policy assistance; and the currency war caused by the use of CBDC may hinder some currency internationalization. The deficiency of this paper lies in that some conclusions are inferences without factual basis and only for

reference. The future research direction lies in how to strike a balance between prudent monetary policy and gradually increasing the internationalization of RMB.

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