

# Research on the Role of e-CNY in Promoting RMB Internationalization

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## Abstract

**The internationalization of the Renminbi (RMB) is a crucial strategic objective for China. Currently, RMB internationalization faces constraints such as insufficient currency value stability, the need to enhance the influence of the Cross-Border Interbank Payment System (CIPS), weak network externalities, and the pressures of dollar hegemony and international currency competition. The issuance and circulation mechanisms of e-CNY, along with its inherent advantages, can help alleviate these issues and provide positive momentum to break through the bottlenecks of RMB internationalization. In the future, China should promote the development of e-CNY by expanding its cross-border application scenarios, enhancing the efficiency and security of cross-border payments, actively improving relevant legal and regulatory systems, seizing the opportunity of "de-dollarization" to encourage and support other countries in using the RMB, and leveraging initiatives like the Belt and Road Initiative (BRI) and the Regional Comprehensive Economic Partnership (RCEP) to guide e-CNY internationalization, thereby injecting fresh momentum into the RMB's global ascent.**

## Keywords

**RMB Internationalization; e-CNY; Cross-border Payment.**

## 1. Introduction

In recent years, monetary cooperation among emerging economies has continuously emerged, and the global "de-dollarization" trend is accelerating. The development of digital currency technology has brought new opportunities for the evolution of the international monetary system and is highly anticipated amidst the global "de-dollarization" trend. As a new form of currency, digital currency not only has the potential to bypass traditional payment systems, opening new paths for cross-border payments, but can also reduce conversion costs between different currencies, enhancing the feasibility of local currency settlement among nations.

As competition among multiple currencies in the international monetary system intensifies, the RMB has become a preferred safe-haven currency for many international market participants due to China's growing comprehensive national power and elevated international status. Driven by the advent of the digital economy, currency forms are gradually transitioning towards digitalization, with private digital currencies emerging and experiencing significant price volatility. Against this backdrop, China's central bank digital currency (CBDC) – the e-CNY – has attracted considerable attention. Currently, the research, development, and global promotion of e-CNY possess certain first-mover advantages, potentially providing favorable preconditions and development opportunities for RMB internationalization. The internationalization of e-CNY represents not only a new practice for the RMB in the digital economy era but also a significant aspect influencing the broader RMB internationalization process. Therefore, in-depth research on the impact of e-CNY on RMB internationalization holds substantial importance.

## 2. Literature Review

With the advent of the digital age and the continuous strengthening trend of RMB internationalization, e-CNY, as China's legal digital currency, has garnered significant attention. Research and discussions on it are increasing, primarily focusing on its characteristics, functions, and challenges. Regarding the essence and features of e-CNY, scholars hold different views: Qiu Xun (2017) suggests it possesses a flexible guiding mechanism capable of directing and controlling currency flow[1]; Zhou Yonglin (2017) points out that its issuance mechanism benefits cross-border payments and macroeconomic policy[2]; Xie Xing and Feng Sixian (2019) emphasize the first-mover advantages of e-CNY[3]. Concerning the benefits and functions, Huang Guoping et al. (2021) believe it can promote the construction of digital financial infrastructure and enhance the effectiveness of monetary policy[4]; Wang Weiling (2023) argues that its architecture and two-tier operational model contribute to the development of the digital economy. Regarding the challenges and impacts[5], Ni Mingyuan (2020) suggests it may impact the internet finance market[6]; Cui Jie (2021) and Meng Yuqun (2021) point out potential risks and legal compliance issues in cross-border payments[7][8]. Most scholars hold an optimistic view towards e-CNY, believing it will provide new opportunities for RMB internationalization. However, some scholars warn of its potential risks, emphasizing the need for a dialectical perspective on its impact on the process of RMB internationalization.

## 3. Overview of e-CNY

### (1) Concept and Characteristics of Digital Currency Technology

Digital currency technology is a new form of currency based on technologies such as cryptography, distributed ledgers, and blockchain, enabling functions like paperless payments, cross-border remittances, and smart contracts. Compared to traditional currencies, digital currencies adopt internet-based transaction methods and algorithmic rules. Currently, Bitcoin, Ethereum, Litecoin, etc., are the most renowned representatives of digital currency. As an emerging financial technology, digital currency is widely applied and valued in the financial sector, characterized by anonymity, programmable control, fast confirmation, high security, borderlessness, and high transparency.

### (2) Operational Mechanism of e-CNY

The core of the e-CNY issuance layer comprises "One Currency, Two Vaults, Three Centers". "One Currency" refers to the sovereign digital currency issued by the People's Bank of China (PBOC), which is responsible for its authorized issuance, quota and information management, and evaluation of commercial banks' technical systems. "Two Vaults" include the central bank issuance vault and commercial bank vaults. The former is a database for storing digital currency, located on the PBOC's private cloud; the latter is a database used by commercial banks to receive, store, and manage digital currency. "Three Centers" consist of the Certification Center, Registration Center, and Big Data Analysis Center. The Certification Center uses Public Key Infrastructure (PKI) or identity-based cryptography to authenticate and manage user identity information, playing a crucial supporting role in controlled anonymity; the Registration Center is responsible for the entire process registration of e-CNY issuance, transfer, and redemption, ensuring consistency of ownership information; the Big Data Analysis Center relies on big data and cloud computing technologies to analyze transaction data, payment behavior, and regulatory control indicators, while performing KYC (Know Your Customer) and AML (Anti-Money Laundering) functions, providing data support for implementing macroeconomic policies.

e-CNY adopts a two-tier operational model, where the central bank constitutes the upper layer for commercial banks, and commercial banks form the lower layer for the public. Its circulation

process includes: First, commercial banks apply to the central bank to exchange for e-CNY with 100% reserve requirements; second, commercial banks cooperate with third-party payment institutions to exchange e-CNY to individuals or enterprises, which can be done through bank deposits or loans at a 1:1 ratio; finally, the public uses e-CNY for transactions and payments, bringing it into market circulation.

### (3) Current Application Status of Digital Currency

Digital currency technology has garnered international attention in recent years and is widely applied in various fields including finance, payments, and social life. Particularly, blockchain-based digital currency technology is extensively used in finance, healthcare, judiciary, logistics, etc. Cryptocurrencies like Bitcoin, Ethereum, and Litecoin, as representative digital currencies, are increasingly used in investment, trading, and payments, gradually becoming mainstream payment methods.

In China, the "e-CNY" issued by the PBOC has been piloted in several cities, featuring security, speed, traceability, and reduced cash usage. Furthermore, with the development of digital currency technology, electronic payment methods like mobile payments, Alipay, and WeChat Pay have become indispensable payment tools in daily life. Digital currency technology can also be used for full-process tracking of goods in areas like food and medicine, enhancing consumer trust in products.

Overall, the use of electronic currency is already widespread, and more areas are expected to leverage electronic currency technology to improve production and living standards in the future. However, to better address potential future risks and challenges, the security and standardization of digital currency technology must be further strengthened, along with effective management to ensure its application in the digital economy.

## **4. Current Situation and Constraints of RMB Internationalization**

### (1) Current Situation of RMB Internationalization

With China's rapid economic growth, RMB internationalization has become a crucial strategic objective. The realization of this goal is driven by multiple factors. First, the continuous expansion of China's foreign trade scale increases the demand for foreign exchange transactions and settlements. Using RMB for real trade can reduce exchange rate risks, improve exchange rate efficiency, and better align with market demands. Second, with deepening reforms, opening-up, and rapid economic development, foreign investor demand for China's capital market is increasing, further promoting RMB internationalization. Finally, RMB internationalization is not only a strategic goal for China but also helps enhance its discourse power, influence, and competitiveness on the international stage.

Currently, in China's trade settlements, the RMB is gradually becoming the main settlement currency for trade between China and countries/regions worldwide. So far, over 120 countries and regions have agreed to use RMB for settlements. In terms of investment and finance, many international banks and financial institutions have launched RMB offshore businesses, continuously increasing the number of Chinese investors. Regarding capital flow, the RMB acts as a significant factor promoting international capital flows. From the perspective of foreign exchange reserves, the RMB is gradually becoming a major foreign reserve currency for central banks, enhancing its position and influence in the global financial system. However, numerous problems and challenges exist in China's development process. The current level of RMB internationalization is not high, with a considerable gap compared to major international currencies; the convertibility of the RMB still needs further improvement; the international credit rating of the RMB also needs enhancement, etc. Additionally, changes in the international political and economic environment will impact RMB internationalization.

The payment share of RMB in international trade can reflect its international settlement status to some extent. According to SWIFT data statistics, the US dollar's international payment share firmly ranks first globally, being over 20 times that of the RMB. Although the RMB's payment share remains roughly fifth, the gap with the USD and EUR is substantial. While the international settlement status of the RMB has improved, most market participants still tend to choose USD and EUR as settlement currencies in international trade due to currency influence. Therefore, the RMB's international payment share needs further expansion. Considerable effort is still required for the RMB to become the world's third-largest payment currency and achieve true internationalization.

## (2) Constraints on the Process of RMB Internationalization

### (a) Insufficient Stability of RMB Value

Currency value stability is mainly examined from internal and external perspectives. Internal stability reflects the stability of domestic prices, i.e., changes in the inflation rate, which helps consumers obtain sufficient price information and compare real currency purchasing power, eliminating information asymmetry. Foreign investors would also have the willingness to participate in that market and hold that currency. External stability is measured by the magnitude of exchange rate fluctuations. Exchange rate stability reduces transaction risks and asset value fluctuation risks, serving as a condition for strengthening bilateral trade and fulfilling the function of an international reserve. Although China's overall prices remain stable, the RMB's external stability performance is relatively insufficient. After the August 2015 exchange rate reform, RMB depreciation led to substantial foreign capital withdrawal from China's market. The COVID-19 pandemic in 2020 caused USD depreciation, triggering significant RMB appreciation. Currently, the intensifying divergence in monetary policies between China and the US, along with the continuous narrowing or even inversion of the China-US interest rate spread, may lead to large-scale short-term capital outflows, increasing downward pressure on the RMB exchange rate.

### (b) Influence of the Cross-Border Interbank Payment System (CIPS) Still Needs Enhancement

China has established CIPS, a payment system specifically for RMB cross-border clearing and settlement business. Direct participants in this system can operate without relying on SWIFT[9]. However, indirect participants still need to use SWIFT for related transactions. Therefore, if the US attempts to impose targeted financial blockades on Chinese high-tech enterprises by influencing SWIFT, the current CIPS system is insufficient to effectively counter such actions. Establishing a new payment and settlement system based on e-CNY could be a crucial tool to counter US hegemony and promote RMB internationalization. The number of CIPS participants is gradually increasing, but its capacity is insufficient compared to the mainstream SWIFT system, and its influence needs further enhancement. Simultaneously, integration with international payment systems needs improvement to attract more participants. Currently, most direct participants in CIPS are located in Asia, predominantly within China, followed by Europe and Africa, while the number of direct participants in North America, South America, and Oceania remains relatively small.

## (3) Weak Network Externalities of the RMB

According to research by Flandreau & Jobst (2006), the network externality of a currency refers to the phenomenon where increased transaction volume in a country's market lowers currency transaction costs, thereby attracting more transaction entities to choose that currency for pricing, settlement, and reserves. This network externality positively impacts currency internationalization. The network externalities of the RMB manifest in two aspects: Firstly, the herd effect – the more entities using RMB internationally, the higher its value and international recognition, attracting more entities to hold RMB, enhancing its liquidity and market choice. Secondly, when the international usage scale of RMB reaches a certain level, international

organizations and central banks hold RMB to meet fund transfer needs, further strengthening its international pricing, settlement, and reserve functions, and consolidating its international status. However, currently, the RMB's network externalities are relatively weak, with the USD and EUR still occupying the central position in the international monetary system. This is mainly because the USD and EUR possess strong usage inertia, granting them powerful network externalities and high currency conversion costs. The RMB's international influence is not yet sufficient to make entities abandon the convenience of using USD/EUR and bear the relatively high conversion costs. Currently, China is actively expanding the scope of RMB usage, playing a positive currency inertia role in Asia. However, gaining global recognition and overcoming the network externality barriers of the USD and EUR will take time. Digital RMB is expected to be a powerful driver in this process.

#### (4) Dollar Hegemony and "De-Chinaization"

The Bretton Woods system laid the foundation for the dollar's hegemonic status. With the "dollar standard" replacing the "gold-dollar standard," the Bretton Woods system began to collapse, and dollar hegemony was formally established. In the subsequent decades, the US launched four wars to monopolize oil pricing power. To this day, the dollar's control over oil pricing and its influence on crude oil prices force countries worldwide to hold substantial dollar reserves, making the dollar's global currency status difficult to shake. Besides monopolizing pricing power over international commodities, the US has recently used global payment clearing power to impose financial sanctions on other countries. Its control over SWIFT (Society for Worldwide Interbank Financial Telecommunication) is particularly prominent. Since the 9/11 attacks, the US gradually gained dominance and surveillance over SWIFT, using pretexts of "national security" and "anti-money laundering" to consolidate its hegemonic position. Consequently, SWIFT has become a tool for US financial sanctions, used to threaten and sanction multiple countries and regions, e.g., removing North Korea's code in 2017 over the "North Korean nuclear issue," and cutting off several major Russian banks from SWIFT in 2022 following the "Russia-Ukraine conflict" to impose financial sanctions on Russia[10]. This demonstrates that excessive global reliance on SWIFT exposes countries to significant financial security risks, especially for China, which is often viewed as a sanction target.

The US instigated Sino-US trade friction through various means and deliberately pursued "de-Chinaization" targeting the RMB, adopting numerous measures to restrict China's development, including imposing tariffs, banning advanced technology exports, and adding entities to export control "entity lists," aiming to affect China's openness and international influence. Furthermore, to alleviate USD liquidity shortages, the US established a global monetary and financial network centered on the dollar. However, its currency swap agreements with 14 central banks during the 2007 subprime crisis and temporary agreements with 9 central banks during the 2020 COVID-19 pandemic both excluded China. In recent years, the US has even used information warfare to suppress Chinese enterprises and cyberattacks to target leading domestic universities in relevant fields. The Sino-US trade friction has not only led to reduced trade and investment volumes, affecting China's cross-border receipts and payments, but may also lead to the US further expanding its suppression and financial sanctions against all of China. In summary, dollar's hegemonic exclusion of the RMB, "de-Chinaization" policies, and deteriorating Sino-US relations are significant factors hindering RMB internationalization.

## **5. Mechanism Analysis of e-CNY Helping to Break Through RMB Internationalization Bottlenecks**

The primary reason the US can exercise "hegemony" over other nations is fundamentally determined by the dollar's long-standing role as the world's central currency. Therefore, for China to break free from US "long-arm jurisdiction" and achieve policy independence and

financial security, it must start from the currency perspective, accelerating RMB internationalization to reshape the current dollar-centric international monetary system. Based on the preceding analysis, the RMB internationalization process faces bottlenecks such as weak network externalities, insufficient currency value stability, and weak influence of the cross-border payment system. e-CNY combines the advantages of traditional fiat currency and private cryptocurrencies, possessing first-mover and platform advantages, which can generate certain in overcoming these bottlenecks.

#### (1) Enhancing Effective RMB Supervision Capability

Effective supervision of a national currency is a powerful guarantee for enhancing its international credibility and thus promoting its internationalization. The issuance and circulation of e-CNY can provide practical tools for combating illegal activities like counterfeiting and cross-border money laundering. On one hand, e-CNY is issued and managed by the PBOC, backed by national credit, ensuring permanent governmental regulatory backing. On the other hand, the underlying technology of e-CNY remains blockchain. The unique code string of each digital yuan unit combines the traceability of private cryptocurrencies while discarding the reproducibility of traditional paper money. Transaction information at every stage is dynamically saved in real-time, cannot be revoked or tampered with, enabling comprehensive data tracking and eliminating counterfeit currency, laying a solid foundation for enhancing the RMB's international acceptability and thereby expanding its network externalities. Furthermore, e-CNY's effectiveness in reshaping the RMB cross-border payment system and enhancing monetary supervision capabilities – i.e., the inherent integration of data flow and fund flow – reduces information transmission costs in areas like settlement payments and capital investment, improves information transparency, usage efficiency, and security. Its advantage in processing data "on-chain" also reduces the management and conversion costs of foreign exchange reserves, increasing other countries' willingness to choose it as a reserve currency, thereby enhancing RMB network externalities from the perspective of increasing its share in official international reserves.

#### (2) Enhancing RMB Value Stability

The issuance of e-CNY can bring new changes to the money multiplier and velocity of circulation, further reducing the demand for physical currency. The widespread application of digital currency is expected to lower the narrow money multiplier and increase the broad money multiplier. The money multiplier refers to the coefficient of economic value generated by base currency issued by financial institutions. Its calculation formula is:

$$K = (1 + Rc) / (Rd + Re + Rc)$$

Where K is the money multiplier, Rc is the cash-deposit ratio, Rd is the required reserve ratio, and Re is the excess reserve ratio.

The deposit ratio is mainly influenced by residents' saving methods, the required reserve ratio is determined by the central bank's monetary policy, and the excess reserve ratio is related to the overall national economic condition. With the promotion of e-CNY and the rapid transfer of electronic money and checks, major banks may need to increase excess reserves, meaning Re will rise. Assuming other ratios remain constant, the money multiplier will decrease. In China, substantial circulation of e-CNY could lower the money multiplier, thereby reducing money supply, curbing inflation, maintaining relative price stability, and preserving internal exchange rate stability. According to the relative purchasing power parity view, stable internal currency and low inflation levels would promote the RMB's long-term strengthening, reduce exchange rate volatility, and advance RMB internationalization. According to monetary circulation theory, excessive currency circulation leads to price hikes and inflation, making fiat currencies (like paper money) symbols of value.

According to Marxian political economy's theory of currency circulation, whether commodities serving as value symbols or fiat currencies delinked from gold, currency circulation is still governed by the laws of money flow. Financial institutions can only control the quantity of notes issued, not their value. A currency's value depends on its quantity; regulating money supply is crucial for maintaining currency value and price stability. The popularization of e-CNY can reduce the money multiplier effect, lower narrow money supply, thereby maintaining relative stability in prices and exchange rates. Simultaneously, adopting the central management model of e-CNY can effectively reduce RMB exchange rate fluctuations.

### (3) Enriching Product Variety and Improving Market Efficiency

Enhancing the breadth and depth of financial market development relies on the active participation of overseas entities. This requires meeting their diverse needs regarding product yields, market liquidity, security, and risk preferences. e-CNY possesses its unique mechanism for issuance, circulation, and payment. Therefore, various financial entities can leverage its low-cost, high-efficiency advantages to collaboratively launch diversified RMB investment products and financial derivatives, injecting vitality into China's financial market and improving its efficiency. Moreover, China's CBDC possesses first-mover and inherent digital platform advantages, which lay a solid foundation for domestic financial market products to be at the forefront of international innovation. Drawing lessons from the experience of the Eurodollar market in promoting dollar internationalization, China should also rely on e-CNY to enrich offshore RMB products, support the construction of the offshore RMB market, accelerate the pace of RMB "going global," and facilitate RMB internationalization. Additionally, for commercial banks, the crowding-out effect of e-CNY on bank demand deposits and the compression of loan scales may force banks to enhance their fintech capabilities, innovate business models and products, further improving market efficiency and enriching the variety of products available in the market.

### (4) Reducing Transaction Costs and Expanding Market Scale

From unilateral opening after joining the WTO in 2001 to the two-way opening that began around 2014 and continues today, China's financial market has achieved connectivity among the three major exchanges in Hong Kong, Shenzhen, and Shanghai, gradually reducing controls on the capital and financial accounts. However, market entry conditions need further liberalization, and transaction costs need reduction to facilitate market investor participation. The technological foundation and payment methods of e-CNY can enhance the liquidity of monetary funds and the convenience of payments. On one hand, it provides opportunities for various domestic transaction entities, especially those unable to open bank accounts, to participate in financial activities like investment and wealth management, thereby meeting the needs of inclusive finance, enriching market participants while expanding market transaction scale. On the other hand, e-CNY can diversify the channels for foreign investors to enter China's financial market, lowering entry barriers and expanding foreign capital inflows. Furthermore, e-CNY's distributed ledger and information-sharing mechanisms can also reduce transaction costs by improving the adequacy of market price information disclosure and resolving information asymmetry, ensuring healthy market operation, promoting large-scale and frequent cross-border flow of market factors, and driving the development of the domestic financial market.

## 6. Policy Recommendations

RMB internationalization is not an overnight process but a gradual, lengthy endeavor. Research on RMB internationalization under digital currency conditions aims to fully understand and grasp the significance of e-CNY, as China's legal digital currency, for RMB internationalization within the broader context of digital economy development. The opportunity presented by the

continuous expansion of e-CNY issuance should be fully utilized, positioning e-CNY as a primary channel and 抓手 (lever) for advancing RMB internationalization. Based on the research conclusions of this paper, the following policy recommendations are proposed:

(1) Expand Cross-Border Application Scenarios for e-CNY, Enhance Efficiency and Security of Cross-Border Payments

The current cross-border payment system suffers from numerous problems, such as numerous intermediate links, high fees, long settlement cycles, and low transparency of fund status. Through point-to-point transactions via CBDC, parties can directly establish a "value chain," with distributed ledgers connecting to form a data "information network," thereby improving the efficiency and security of payment settlement. In practice, some of China's important fintech companies and cross-border trading platforms have begun exploring market-oriented cross-border payment settlement systems. These enterprises play a key role in forming a market-oriented e-CNY payment and settlement platform system. Therefore, the demonstrative role of these core enterprises and platforms can be fully utilized, cooperating with the central bank's digital currency to build a multi-level, multi-participant market-oriented e-CNY payment and settlement platform system.

One approach involves integrating e-CNY with cross-border e-commerce and cross-border logistics. China has become the world's largest B2C cross-border e-commerce market, and promoting e-CNY will facilitate cross-border payment practices. Another approach is to integrate resources from leading enterprises like Ant Group and Alipay, leveraging the Shanghai-Hangzhou dual-city cooperation path to carry out application cooperation for cross-border payments using e-CNY. Through years of exploration and cooperation, Alipay has established mature global cross-border payment services.

Furthermore, active participation in multi-CBDC bridge projects is crucial to establish a "corridor network" for e-CNY. China has already participated in the multi-CBDC Bridge (m-CBDC Bridge) research project led by the Bank for International Settlements Innovation Hub (BISIH), aimed at establishing a "corridor network" connecting the CBDC systems of multiple countries. This holds promise for solving traditional challenges in cross-border payment and settlement, providing a favorable platform for e-CNY internationalization.

However, under the "one superpower, multiple currencies" international monetary landscape, whether e-CNY and its cross-border payment system can promote RMB internationalization still depends on fundamental factors such as RMB convertibility, the degree of capital controls, and the openness of the capital market. Only by continuously opening up trade and financial markets, enhancing RMB international credibility, and strengthening comprehensive national power can RMB internationalization be advanced with the support of fintech, enabling e-CNY to gain comprehensive advantages in future CBDC international competition.

(2) Lead e-CNY Internationalization with the Belt and Road Initiative (BRI) and RCEP

China can leverage the Belt and Road Initiative (BRI) to promote the application of e-CNY in areas such as outward foreign direct investment, foreign aid, and bilateral industrial cooperation. Simultaneously, utilizing its vast energy demand, China can strive for a say in the field of new energy settlement and use this to promote cross-border payments in e-CNY. In January 2022, the Regional Comprehensive Economic Partnership (RCEP) officially came into effect, providing opportunities to integrate cross-border e-commerce, cross-border logistics, cross-border payments by financial institutions, and investment and financing businesses with e-CNY internationalization, enabling e-CNY to play a role in a wider range of application scenarios.

In advancing RMB internationalization, it is necessary to identify the right entry points and breakthrough areas, selecting countries with a good foundation for monetary cooperation with China as priority pilot zones. Amidst increasing tensions between China and developed

countries, the BRI holds promise for promoting regional economic cooperation and monetary cooperation between China and neighboring countries. Conducting multi-CBDC bridge experiments in mature BRI partner countries, creating diversified offshore RMB markets, not only providing basic financial services like payment, settlement, and credit but also offering comprehensive services such as securities investment and financial derivatives, forming payment alliances; preliminarily building an international clearing system, developing an e-CNY cross-border payment and settlement system, making the RMB the preferred currency for bilateral and multilateral trade payments and settlements in BRI countries, thereby promoting the diversification of payment, pricing, and settlement instruments in global trade and financial investment, optimizing the currency landscape of global trade and financial investment, and reducing dependence on the dollar.

At the central bank cooperation level, increasing exchanges and cooperation on digital currencies could be considered, promoting pilot programs for the trading, repatriation, and free convertibility of central bank digital currencies through bilateral currency swap agreements. Promoting e-CNY internationalization and global legal digital currency trading and cooperation, expanding e-CNY's international influence sphere.

### (3) Seize the Opportunity of De-dollarization, Encourage and Support Other Countries in Promoting and Using the RMB

Driven by its own economic interests, the US frequently imposes economic and financial sanctions on countries like Russia, Syria, and Iran, causing these nations to face difficulties in international trade and finance. To counter sanctions, these countries have taken actions to accelerate "de-dollarization," expanding the use of the RMB in trade payments and foreign exchange reserves. As oil-exporting countries, some have begun using RMB for settlement and pricing, which has also spurred wider use of the RMB in other countries with close economic and trade ties to them. China should increase the proportion of RMB usage in oil transactions, gradually elevate the RMB's position in international trade, and promote its internationalization. Simultaneously, China should support relevant countries in developing their own independent payment and settlement systems to reduce dependence on the dollar. For example, the INSTEX payment channel established by 14 EU member states with Iran, and the cooperation between Russia, Switzerland, South Africa, and other countries with Iran on digital currencies, are measures to bypass US sanctions. If these plans are successfully implemented, the RMB could also expand its cross-border payment application scenarios through these channels.

Furthermore, with the signing of the RCEP by China, Japan, South Korea, Australia, New Zealand, and ASEAN, China should fully leverage this opportunity, targeting ASEAN and neighboring countries as the primary regions for the issuance of e-CNY and the construction of its cross-border payment and settlement system. China has already signed currency swap agreements with Japan, South Korea, Singapore, Malaysia, Thailand, and other countries. When conditions are ripe, cooperation with these countries on RMB pricing, payment, and settlement should be promoted to facilitate the widespread application of e-CNY in the region.

### (4) Actively Improve Relevant Legal Systems and Regulatory Frameworks

The distributed ledger model of e-CNY poses greater challenges to regulation and may potentially threaten financial stability and national security. Therefore, it is imperative to accelerate the upgrading of regulatory technology and improve relevant laws, regulations, and regulatory systems to ensure the legality and security of e-CNY in future large-scale applications. The "Report on the Work of the State Council regarding Financial Work" released by the National People's Congress website in October 2022 proposed studying and promoting the introduction of laws, regulations, and industry policies related to e-CNY. Currently, e-CNY already complies with laws such as the "Cybersecurity Law," "Personal Information Protection

Law," and "Anti-Money Laundering Law." However, to better implement the characteristics of e-CNY, specific legal systems for digital wallets should be formulated, and corresponding punitive measures strengthened. Additionally, relevant laws and policy documents like the "Law of the People's Bank of China" need refinement to build a comprehensive regulatory system for e-CNY, covering issuance circulation, cross-border payments, foreign exchange management, etc. Regarding privacy protection, while e-CNY's ledger technology facilitates monitoring currency flow, it could also lead to personal financial information leakage. Therefore, legal and regulatory mechanisms for personal data protection need improvement, such as establishing independent supervisory bodies, designing customized data protection mechanisms, and setting up regulatory committees at the international level to strengthen oversight of central banks and government-related institutions. In terms of cross-border payments, China should actively participate in the construction of the international cross-border payment regulatory system, adopt various cooperation models, gradually improve the legal and regulatory framework for the e-CNY cross-border payment system, prevent financial security risks like illegal money laundering and illegal cross-border fund transfers, and establish a legal foundation to solidify e-CNY's role in advancing RMB internationalization.

## References

- [1] Qiu Xun. Issues, Strategies, and Responses to the Issuance of Digital Currency by the People's Bank of China [J]. *Southwest Finance*, 2017(03): 14-20.
- [2] Zhou Yonglin. Implementation Models of Central Bank Digital Currency [J]. *China Finance*, 2017(05): 59-60.
- [3] Xie Xing, Feng Sixian. A Theoretical Study on the Impact of Legal Digital Currency on China's Monetary Policy [J]. *Economist*, 2019(09): 54-63.
- [4] Huang Guoping, Ding Yi, Li Wanrong. The Development Trend, Impact, and Policy Recommendations of Digital RMB [J]. *Research on Financial and Economic Issues*, 2021(06): 60-69.
- [5] Wang Weiling. Difficulties and Key Points in Accelerating the Orderly Development of Digital RMB [J]. *Economic Review*, 2023(02): 122-128.
- [6] Ni Mingyuan. The Impact of Digital RMB on Internet Finance and Countermeasures [J]. *Journal of Times Economy and Trade*, 2020(02): 16-17.
- [7] Cui Jie. Research on Risk Prevention in the Integration of RMB Digital Currency and Overseas Digital Currencies: From the Perspective of RMB Internationalization [J]. *Communication of Finance and Accounting*, 2021(18): 143-146.
- [8] Meng Yuqun. Legal Issues and Rule Construction for Cross-border Payments of Legal Digital Currency [J]. *Political Science and Law Tribune*, 2021(04): 36-47.
- [9] Bao Jianyun. Sovereign Digital Currency, Fintech Innovation, and Reform of the International Monetary System: Also on the Issuance, Circulation, and Internationalization of Digital RMB [J]. *Frontiers of the People's Forum·Academic Frontiers*, 2020(02): 24-35.
- [10] Chen Yao, Yang Zhihuang. The SWIFT System, US Financial Hegemony, and China's Response [J]. *International Economic Cooperation*, 2021(02): 82-96.