# RMB Internationalization: An In-Depth Discussion of Opportunities and Challenges

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**Abstract.** With the rise of China's economy, the use of the RMB in multilateral international trade has been increasing. For instance, international students or tourists can directly use Alipay or WeChat for overseas consumption, as the system automatically converts foreign currencies into RMB for settlement. In the short term, the US dollar's traditional dominant position is unlikely to be replaced. However, in the long run, since the collapse of the Bretton Woods system, the global monetary system has evolved into a pattern of multipolar competition. From the Japanese yen and Euro to the Canadian dollar, and now the increasingly prevalent use of the RMB, this trend will ultimately lead to the emergence of a diversified currency system based on multiple reserve currencies. As the legal tender of China, the world's second-largest economy, the RMB plays a crucial role in major trading arenas. The accelerated internationalization of the RMB, coupled with advancements in digital technology, is further facilitating the process of global economic integration.

**Keywords:** RMB, Internationalization, Payment.

## 1 Introduction

Based on the current international standing of the RMB, this paper demonstrates its robust momentum in the internationalization process through data analysis across three dimensions: the RMB's share in international payments, its proportion in global foreign exchange reserves, and the development of the offshore RMB market. The research focuses on three major obstacles hindering RMB internationalization: constraints on cross-border liquidity due to capital account controls, limitations in the coverage of cross-border payment systems, and the complexities of the international settlement environment caused by geopolitical competition. On this basis, the paper proposes a multi-dimensional strategic approach: deepening domestic financial market reforms to strengthen institutional foundations, expanding currency usage scenarios through offshore market innovation, reconstructing cross-border payment infrastructure with digital RMB technology, and establishing a new paradigm for international liability management. Building on existing research, the Chinese government should further expand financial openness. In addition to traditionally advancing domestic financial markets and the offshore RMB market, it should persistently scale up international liability


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holdings and achieve leapfrog development through digital currency innovation. While safeguarding its financial security, China ought to leverage fintech to drive reforms in the international monetary system, thereby offering a Chinese paradigm for emerging economies.

## 2 Current Status of RMB Internationalization

In recent years, alongside the further development of China's economy, the internationalization of the RMB has progressed steadily with all key indicators demonstrating sustained improvement. The currency has played an increasingly prominent role in international trade, witnessing an expanding scope of application that provides diversified payment instruments for financial institutions and enterprises.

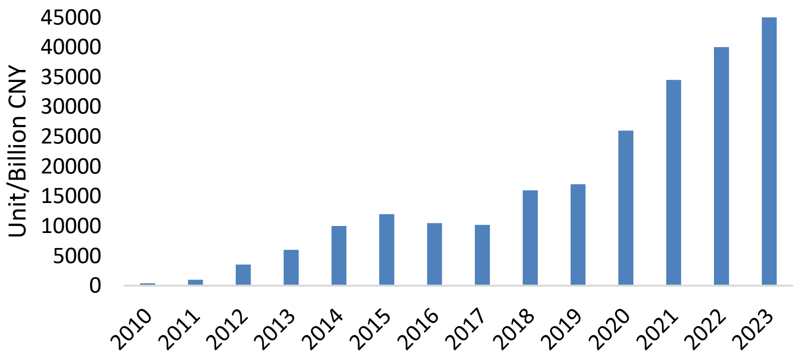


**Fig. 1.** The Annual Cross-Border Receipts and Payments of RMB from 2010 to 2023 [1].

### 2.1 Share of International Payments

In 2022, the total amount of cross-border RMB payments and receipts amounted to 42.1 trillion yuan, marking a year-on-year increase of 15.1%. Of this, receipts totaled 20.5 trillion yuan, up 10.9% (see Fig. 1), while payments amounted to 21.6 trillion yuan, up 19.5%, with a receipt-to-payment ratio of 1:1.05. Since the pilot launch of cross-border RMB settlement between China and Hong Kong in 2009, the RMB's cross-border payments and receipts initially experienced explosive growth, followed by stable growth in recent years.

According to Society for Worldwide Interbank Financial Telecommunication (SWIFT), the RMB has ranked as the world's fourth-largest payment currency, since the inclusion of the RMB in the International Monetary Fund (IMF) Special Drawing Rights (SDR) basket in 2015, with its share of global payments continuing to rise. By July 2024, the RMB’s share of global payments reached 4.74% (see Fig. 2), a record high since data began being tracked. Over the past three years, the RMB’s share of international payments in August 2024 had more than doubled compared to its share in January 2021. Additionally, the RMB's share of the global trade finance market has also been steadily increasing. For example, in July 2024, the RMB's share in the trade finance market reached 6%, surpassing the euro's share of 5.83% [2].

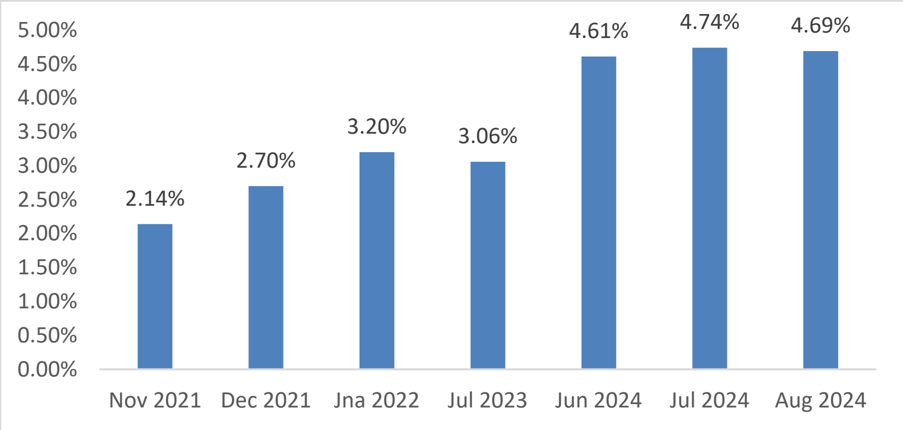


**Fig. 2.** The Proportion of RMB in International Payments.

### 2.2 RMB's Share in Global Foreign Exchange Reserves

The scale and share of the RMB in global foreign exchange reserves have steadily increased. As of now, more than 70 foreign central banks and similar institutions have entered China's interbank bond market, and monetary authorities from over 75 countries and regions have included the RMB in their foreign exchange reserves. As of the third quarter of 2024 (see Fig. 3), 80 countries globally held RMB reserves totaling 216.7 billion USD.

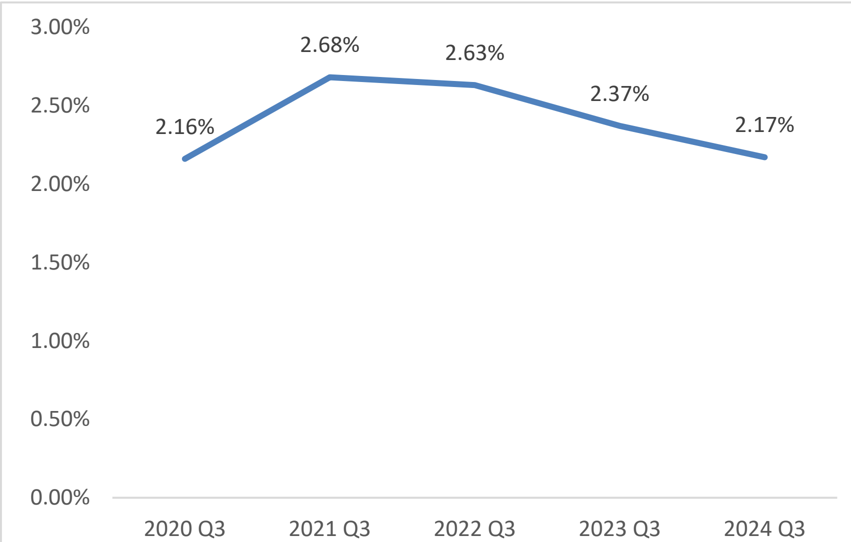


**Fig. 3.** The proportion of the RMB in global foreign exchange reserves [3].

### 2.3 The Scale of the Offshore RMB Market

In recent years, the scale of the offshore RMB market has continued to expand. The offshore RMB market in Hong Kong accounts for about 60% of the total scale, highlighting Hong Kong's dominant position in the offshore RMB market [4]. Additionally, the clearing volume of offshore RMB has grown rapidly. The Hong Kong RMB Real-Time Payment System processed clearing amounts close to 500 trillion yuan in 2023, a 24.8% year-on-year increase, maintaining a strong growth momentum (see Fig. 4).

In Hong Kong, for instance, bonds accounted for 86% of the offshore RMB financing business in 2023, while loans accounted for 65%. This demonstrates that the offshore RMB market provides abundant financing channels for businesses and financial institutions. As the clearing volume continues to grow, the clearing and payment functions of offshore RMB are also continuously improving. As the offshore RMB clearing center, Hong Kong's clearing system has gained widespread recognition for its efficiency and stability.

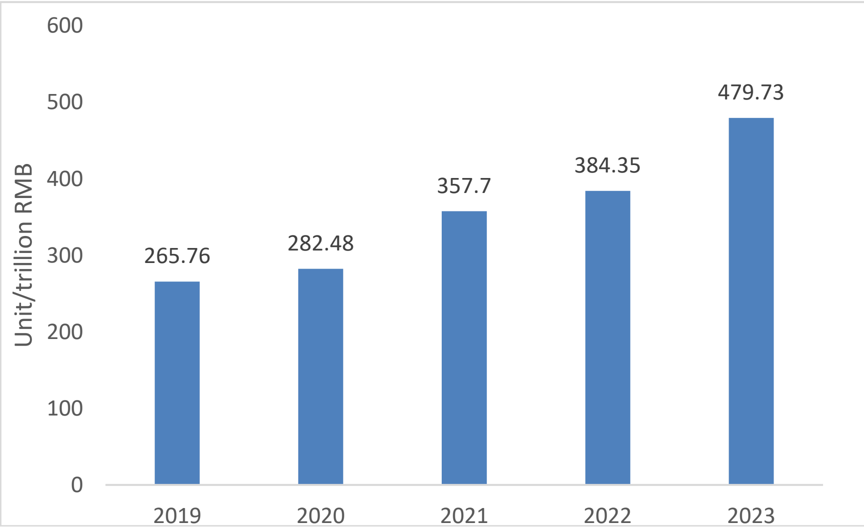


**Fig. 4.** Clearing Amont Processed by the Hong Kong RMB Real-Time Payment and Settlement System [5].

## 3 The Main Challenges for the Internationalization of the RMB

In recent years, the internationalization of the Renminbi (RMB) has faced headwinds amid a sluggish global economy. Structural challenges within China's financial system—such as capital market openness, foreign investment restrictions, and the RMB settlement infrastructure—have raised concerns among international investors. Capital control measures imposed on Chinese residents further constrain cross-border payment flows, while complex geopolitical dynamics and heterogeneous regulatory frameworks across nations compound obstacles to the RMB's global expansion.

### 3.1 The Low Degree of Openness of the Financial Market

Currently, China implements a policy of partial capital account convertibility, and the incomplete liberalization of the capital account restricts the free circulation of the RMB, as international investors are highly concerned that the lake of freedom to move funds in and out of the market of China will limit their ability to manage risks and seize opportunities for investment, thus making them cautious about use the RMB. For instance, in terms of foreign exchange management, China maintains relatively stringent controls. Residents and enterprises must comply with the regulations of the State Administration of Foreign Exchange when conducting foreign exchange transactions. The annual foreign exchange quota for individuals is capped at $50,000, which covers all overseas expenditures including travel, study abroad, medical treatment, and investment [6]. This implies that if an individual has already utilized part of the quota within a year, the funds available for overseas investment will correspondingly decrease.

Regarding channel restrictions, Chinese citizens cannot directly purchase stocks of foreign companies through domestic banks or financial institutions. They must engage in indirect investment through specific channels (such as QDII, Stock Connect, etc.) or use overseas accounts, all of which are subject to regulation and limitation. Although the Chinese government has gradually relaxed the market access policies for foreign banks and financial institutions, foreign institutions still face numerous restrictions and approval procedures when establishing branches or subsidiaries in China.

In terms of Chinese stock market, although foreign investors are allowed to trade A-shares through mechanisms like the Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect, there are strict limits on the shareholding percentages for individual foreign investors and all foreign investors combined in a single listed company. These restrictions limit the control foreign investors can have over Chinese listed companies.

These examples illustrate that despite the policies promoting openness, foreign investment still faces a series of challenges and restrictions when entering and expanding in the Chinese market. Due to these restrictions, foreign investors often adopt a cautious approach to entering and exiting the Chinese market, and the liquidity of the RMB may suffer significant setbacks.

### 3.2 The Inadequacy of the RMB Settlement System

Since the People's Bank of China launched the CIPS (Cross-Border Interbank Payment System) in 2015, it has attracted many banks and countries to join. However, compared to SWIFT, which handles over 30 million messages daily, the scale of the RMB cross-border payment system remains relatively small. As of August 2024, the RMB accounted for only 4.69% of the total settlement volume in SWIFT, far below the US dollar, euro, and pound. Furthermore, RMB clearing banks are mainly concentrated in Asia and Europe, and the coverage of the RMB clearing bank network is insufficient.

Under the current clearing bank model, the clearing path for RMB cross-border transactions is too long [7].

Network Coverage Limitations: Although CIPS has expanded to 168 direct participants (71% foreign) and 1,461 indirect participants across 119 countries, its geographic reach remains uneven. For instance, over 95% of its participants in "Belt and Road" countries are foreign banks, indicating reliance on third-party intermediaries79. In contrast, SWIFT's daily message volume exceeds 30 million transactions, reflecting its entrenched dominance. Clearing Path Complexity: The reliance on indirect participants introduces inefficiencies. Transactions often require multiple intermediaries, prolonging settlement times and increasing operational risks7. Functional Gaps: While CIPS supports advanced mechanisms like DvP and PvP, its integration with global financial infrastructure (e.g., SWIFT) is still evolving. For example, SWIFT remains the primary channel for non-RMB transactions, limiting CIPS's role as a standalone system.

### 3.3 The Difficulties Faced in the International Circumstance

Amid escalating global trade tensions and shifting geopolitical dynamics, cross-border economic interactions have encountered growing complexities. Certain nations have intensified regulatory measures in areas such as trade policies and financial compliance, prompting adjustments in international settlement practices. For instance, following recent geopolitical developments, the use of non-traditional currencies in bilateral trade has expanded notably [8]. By mid-2024, alternative currency transactions accounted for over half of settlements in major emerging market exchanges. Financial institutions across multiple jurisdictions have reportedly enhanced due diligence procedures for cross-border transactions, with some commercial banks implementing precautionary measures regarding specific trade settlements. Market analysts observe that certain regional banks have gradually restricted acceptance of settlements through both traditional reserve currencies and alternative payment vehicles, reflecting heightened sensitivity to compliance risks in international finance. These evolving patterns underscore the challenges faced by emerging settlement mechanisms in navigating an increasingly fragmented global financial landscape, where technical compliance requirements and geopolitical considerations are reshaping transactional behavior.

## 4 Strategic Development and Countermeasures for the Internationalization of the RMB

To overcome these challenges, a multidimensional strategic framework must be established. This requires implementing more open and robust policies to actively develop domestic financial markets and offshore RMB hubs, innovate international liability management mechanisms, and optimize application scenarios for the digital yuan. Notably in the digital currency domain, China's groundbreaking initiatives—including the CIPS and the Central Bank Digital Currency Bridge project—are injecting fresh momentum into global monetary architecture. These digital infrastructures will further consolidate the RMB's position in the international monetary hierarchy.

## 4.1 Actively Develop the Domestic Financial Market

Since the proposal of institutional opening-up in 2018, China has accelerated the pace of opening up in the financial sector. In the process of RMB internationalization, it is essential to further expand the interconnectivity of domestic and international financial markets. For instance, the establishment of mechanisms such as the Shanghai-Hong Kong Stock Connect and the Shenzhen-Hong Kong Stock Connect has strengthened the links between the mainland and Hong Kong capital markets, providing convenience for foreign investors to participate in China's capital markets. By the end of 2023, the scale of RMB assets held by foreign investors reached 9.4 trillion yuan, which is 3.3 times the amount recorded since statistics began in 2013. This growth is attributed to the opening up of financial markets. In the future, China should continue to deepen institutional opening-up to attract more international capital inflows.

First, a high-quality and efficient direct financing market should be developed to enhance marketization and improve market effectiveness. Further improvements should be made in securities rating, securities guarantee systems, and the accuracy and transparency of ratings. This would also require increasing the market-oriented nature of rating agencies and improving the operational efficiency of the financial market. Second, the marketization of interest rates and exchange rates should continue, and the system for forming the exchange rate of the RMB should be improved. Accelerating the development of the foreign exchange market and enhancing the marketization of this market are crucial [9]. New types of foreign exchange products should be introduced to provide more hedging or investment tools for participants. Although short-term exchange rate reform may lead to fluctuations in the RMB exchange rate, in the long term, such reform will help the RMB reach a balanced exchange rate level, enhancing its ability to withstand external shocks and increasing international recognition of the currency. Exchange rate fluctuations are also one of the major difficulties faced during the early stages of internationalization. Finally, high-level financial market opening should be supported by an enhanced regulatory capacity, with ongoing improvements in laws and regulations, especially those related to market opening. It is crucial to ensure that the Chinese financial market can resist external shocks, preserve the country’s industrial advantages, and make financial market opening a win-win situation.

## 4.2 Actively Develop the Offshore RMB Market

In 2024, the issuance volume of offshore RMB bonds in Hong Kong reached RMB 1.5 trillion, marking a year-on-year increase of 32%, with "panda bonds" (RMB-denominated bonds issued by foreign entities in mainland China) accounting for nearly RMB 200 billion, a surge of 150% compared to the previous year. To further enhance market appeal, the launch of the "Bond Connect Northbound Offshore Bond Repo Business" in February 2025 represented a milestone. This initiative allows foreign investors to use onshore bonds as collateral to access offshore RMB liquidity. On its first trading day, multiple transactions were executed, significantly reducing financing costs and revitalizing RMB 690.3 billion worth of onshore bond assets. Institutions such as

Standard Chartered Bank and ICBC Asia have leveraged this mechanism to provide liquidity support for investors, facilitating the transformation of RMB bonds from a "hold-to-maturity" asset class to a "trading + investment" instrument [10].

To bolster market sophistication, offshore markets could draw lessons from the U.S. dollar markets by developing derivatives such as “interest rate swaps” and “foreign exchange options”. For instance, London’s offshore U.S. dollar market attracts 60% of global foreign exchange trading volume through LIBOR-linked derivatives. In 2025, the Hong Kong Monetary Authority (HKMA) proposed optimizing the clearing mechanism for RMB derivatives and promoting RMB-denominated commodity futures contracts to enhance hedging capabilities. Additionally, the "Swap Connect" mechanism introduced in 2024 already permits foreign investors to participate in mainland China’s interest rate swap market. This framework could be extended to offshore markets, creating a cross-market risk management network.

To attract long-term capital, offshore markets could innovate thematic products like REITs and green bonds. In 2024, Hong Kong issued its first offshore RMB carbon-neutral REIT, raising RMB 5 billion for renewable energy projects in the Greater Bay Area. With an annualized return of 6.8%, this product attracted sovereign wealth funds and pension funds, demonstrating how ESG-aligned instruments align with global capital allocation trends while expanding RMB usage scenarios.

Singapore’s success as an offshore hub stems from its clear regulatory frameworks, such as the “Banking Act” and “Securities and Futures Act”, which standardize cross-border transactions. Hong Kong could refine its “Clearing and Settlement Systems Ordinance” to clarify the legal status of offshore RMB derivatives and establish internationally compatible bankruptcy resolution mechanisms. Strengthening anti-money laundering (AML) oversight and cross-border capital flow monitoring is equally critical to prevent the offshore market from becoming a conduit for arbitrage.

To reduce transaction costs, Hong Kong announced in 2025 that offshore RMB bond interest income would be exempt from profits tax, while streamlining the approval process for Qualified Foreign Institutional Investors (QFII). Similar policies could be adopted by other offshore centers—for example, London is exploring tax-free trading mechanisms for RMB sovereign bonds to boost competitiveness [11].

In the future, we can expand Offshore Center Networks: Establish RMB clearing banks in emerging regions like Africa and the Middle East. For instance, the Dubai Mercantile Exchange plans to launch RMB-denominated crude oil futures. Strengthen Hong Kong’s hub role: The HKMA aims to consolidate its advantages through liquidity provision, product innovation, trade finance optimization, and infrastructure integration. Promote Cross-Border Digital RMB: Pilot offshore digital RMB applications in cross-border trade, such as blockchain-based settlement platforms in the Guangdong-Hong Kong-Macao Greater Bay Area.

In conclusion, building a robust offshore RMB market requires product innovation as the core driver, regulatory coordination as the safeguard, and market depth as the ultimate goal. By transitioning from a "trade settlement currency" to an "investment and reserve currency".

### 4.3 Continuously Expand the Scale of International Liabilities in a Steady and Sustainable Manner

Empirical results show that, compared to international assets, international liabilities are more effective in promoting and facilitating currency internationalization. Expanding the scale of international liabilities means attracting more foreign capital into the domestic financial market, which can participate in relevant financial activities directly or indirectly, improving RMB circulation channels. From a policy perspective, it is necessary to gradually relax the access thresholds for foreign financial institutions into China's financial market under appropriate conditions. Allowing foreign institutions to directly participate in building financial institutions will enhance the diversification of China's financial market, introduce international financial institutions' technical expertise and advanced concepts, and encourage product and technological innovation among domestic institutions. Additionally, since international investors generally have higher recognition and trust in international institutions, this can guide them to follow foreign financial institutions into China's market, thereby optimizing resource allocation in China's financial market. From a product perspective, financial products need to align with international standards and be innovated. International investors enter foreign financial markets because they can obtain higher returns or better risk hedging. Currently, China's financial market has limited product variety and depth, with significant gaps in bond products in terms of duration, structure, and liquidity when compared to developed countries. Equity financing also tends to favor large enterprises. Therefore, it is crucial to continuously improve and establish a multi-tiered financial market, optimize and promote stock markets such as the Science and Technology Innovation Board, and encourage financial institutions to innovate in management systems and product types [12]. This will align with the demands of international investors and attract more foreign investment into China's financial market. Of course, while introducing foreign investors and expanding China's international liabilities, it is important to guard against financial risks and balance quantity and quality, relaxing access thresholds under appropriate conditions to maximize the positive externalities of financial market opening.

### 4.4 Rely on Technological Advancements to Achieve a Leapfrog Development of Digital RMB

Digital RMB is essentially a digital form of legal currency that retains the credit backing and national security of traditional currency, while integrating the convenience and efficiency of modern information technology. Compared to traditional currency, digital currency is not only super-sovereign but also cheaper, more efficient, and more secure. It can operate independently of the SWIFT system when necessary, providing an innovative alternative for international payments and settlement. It facilitates multi-currency payment activities and ensures the smooth operation of world trade and international communication, offering flexibility and efficiency for international trade and exchanges. Digital RMB addresses the world's diverse currency and payment needs, reduces potential costs and risks, and is expected to achieve a leapfrog development of

RMB internationalization. In recent years, technological advancements have provided strong technical support and innovative momentum for RMB internationalization, such as CIPS, the Central Bank Digital Currency Bridge project, blockchain, artificial intelligence (AI), 5G and 6G, and smart technologies [13]. In 2015, China launched CIPS, a milestone in the RMB internationalization process, providing an efficient and secure settlement platform for cross-border RMB payments, greatly promoting the use of RMB globally. With the commercialization of 5G technology, its high-speed, low-latency network features provide more stable and rapid communication support for financial transactions. Although 6G technology is still under development, its expected ultra-high performance will bring broader application scenarios for future financial technologies.

Through the connection of central bank digital currency systems in different countries, instantaneous cross-border payment settlement has been achieved, reducing costs and opening new paths for RMB internationalization. The development of digital RMB marks an important step in the digital transformation of currency. It is an inevitable choice in line with the digital age and represents a higher stage of the information revolution, symbolizing the deep integration of financial technology and currency forms. The innovative application of digital RMB can enhance the efficiency and security of currency circulation, while also strengthening national financial security and the autonomy of monetary policy. In the face of global economic integration and regional economic bloc trends, prudently advancing digital RMB will provide new momentum for stable economic growth in China and globally, ensuring China can seize developmental opportunities in a rapidly changing international environment. China began researching digital RMB years ago, and pilot programs have been carried out in cities like Suzhou, Shenzhen, and Xiong an New Area. If substantial progress is made in international cooperation on digital currency regulation, data security, and privacy protection in the future, it will significantly increase China's influence in the global digital currency rule-making process, promoting the construction of a new international currency framework centered around digital RMB [14].

## 5 Conclusion

Over the past decade, the internationalization of the RMB has accelerated significantly. This progress is underpinned by the rapid growth of the Chinese economy and reforms in the financial sector. Increasingly, international trade is being settled in RMB, the proportion of RMB in global payments is rising, and central banks around the world are holding more RMB as part of their foreign exchange reserves. Notably, the offshore market in Hong Kong handles over 60% of overseas RMB transactions and has introduced innovative financial products such as carbon-neutral real estate investment funds and digital bond repurchase agreements. However, the path to globalizing the RMB is not without challenges, including capital flow restrictions, an underdeveloped cross-border payment system, and complex geopolitical factors, all of which pose obstacles to the RMB's full integration into the global financial system.

This research proposes a multifaceted approach to further the internationalization of the RMB. Firstly, it suggests combining institutional openness with technological innovation. For instance, the ongoing pilot of the digital RMB could revolutionize cross-border payment methods, making transactions more convenient and secure. Secondly, it emphasizes the need to enhance the role of offshore markets by introducing a more diverse range of financial products and coordinating regulatory policies across different jurisdictions. This would not only improve liquidity but also better manage risks. Lastly, by optimizing market rules and developing new investment products, China can attract more foreign investors to participate in its markets, thereby naturally expanding the international influence of the RMB.

Looking ahead, the multilateral Central Bank Digital Currency Bridge is expected to serve as a significant vehicle for promoting the internationalization of China's digital yuan, linking domestic and international markets, and bridging the key nodes of the dual circulation system. In the future, China and its trading partner countries can construct and enrich the digital yuan payment system, developing it into a global multilateral cross-border payment platform, thereby providing greater support for facilitating international trade.

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