

# Pathways for the Internationalization of the Renminbi in the Context of Digital Transformation

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**Abstract:** With the rapid development of modern information technologies such as cloud computing, big data and artificial intelligence, digital transformation has not only changed the traditional financial ecosystem, but also provided a brand-new perspective and path for promoting the internationalization of the Renminbi, which is of great significance for promoting the process of Renminbi internationalization. This paper employs literature analysis and qualitative analysis methods to sort out the current situation, predicaments and new opportunities of the internationalization of the Renminbi, explore its digital transformation path, and put forward suggestions to accelerate the process.

**Keywords:** Digital Transformation; RMB; Internationalization; Digital Technology Innovation

## 1. Introduction

Over the past decade or so of systematic efforts to promote the internationalization of the Renminbi, its functions as an international currency—including cross-border payments, reserves, and pricing—have been significantly enhanced. The offshore Renminbi market has developed rapidly, and the Renminbi's status as an international currency has steadily improved[1]. However, the degree of internationalization still lags significantly behind that of the US dollar and the euro.

Currently, China's economy is at a critical stage of transformation. The digitalization and intelligent development of the industrial system are continuously promoting China's transition toward high-quality development. Meanwhile, the digital transformation of the financial system serves as a key driving force for the development of China's manufacturing sector, creating a favorable opportunity for the development of the digital economy[2]. Under

the backdrop of digital transformation, new digital technologies can reduce the operational costs of currency, enhance the efficiency of transaction settlement, promote the internationalization of the Renminbi, thereby accelerating the operational speed of China's industrial sector, driving digital transformation, and achieving high-quality economic development.

Given the maturity of China's economic and technological conditions, researching the pathways for the internationalization of the renminbi under the digitalization context can play a beneficial role in accelerating the digital transformation of China's financial sector[3], encouraging financial technology innovation, driving reforms in the international financial governance system, and promoting the internationalization of the renminbi.

This paper provides insights into accelerating the internationalization process of the Renminbi and exploring new pathways when obstacles arise in its internationalization journey. Currently, the main paths for Renminbi internationalization include regionalization, a dual-track system, and the monetary function approach. These paths face challenges such as loose financial cooperation within regionalization, a lack of linkage mechanisms between onshore and offshore financial markets leading to isolation, the dominance of the US dollar, and restrictions on digital currencies hindering the Renminbi's rise in status. In response, this paper proposes that the development of Renminbi internationalization in the current stage should rely on digital technology in the digital age to formulate new strategic paths.

This has implications for the Chinese government of prioritizing the development of central bank digital currency. The RMB faces suppression from the United States on its path to internationalization and challenges from U.S. private digital currencies, necessitating urgent action. In the future, the main battlefield for

monetary international sovereignty will shift to the digital currency arena. Therefore, during the process of Renminbi internationalization, we must leverage the advantages of the current digitalization context, harness the momentum of digital economic development, and explore additional pathways for Renminbi internationalization.

## **2. Related Literature**

### **2.1 The Logic of the Internationalization of the Renminbi**

Since the 1960s, the Federal Reserve has established a currency swap network, providing dollar liquidity to other countries to maintain the stability of the dollar's value and the attractiveness of dollar assets, which is conducive to consolidating the international status of the dollar. Under the international monetary system at that time, in order to stabilize exchange rates and control reserve flows, the Federal Reserve signed currency swap agreements with several major economies and the International Monetary Fund successively since 1962, gradually forming this network[4]. After the outbreak of the global financial crisis in 2008, in the face of the tight global dollar liquidity, the Federal Reserve established a bilateral dollar liquidity swap mechanism with the central banks of some developed economies to enhance the confidence of the international market in the dollar and maintain the dominant position of the dollar in international reserves and trading activities.

The United States promotes institutional changes through legislation, breaks down barriers to the flow of factors, and promotes the construction of a unified domestic market and the smoothness of domestic circulation. A sound domestic circulation, by expanding domestic market demand and stimulating the vitality of independent innovation, not only enhances the investment and financing needs of market entities, promotes the development of the financial market, and provides financial support for the internationalization of the US dollar, but also boosts their industrial transformation and upgrading and improves their position in the international division of labor[5]. In the international division of labor pattern, its key position has promoted the continuous demand for its goods and funds in the international market and enhanced the bargaining position of

the US dollar in cross-border transactions. Long-term technological accumulation and market advantages, combined with measures such as economic cooperation, have supported the formation and development of the international economic order dominated by the US dollar[6].

The Global Banking Financial Telecommunication System, the New York Clearing House Interbank Payment System, and the Federal Reserve Communication System, as financial infrastructures for processing global cross-border transaction information and funds, have played significant roles in maintaining the dominance of the US dollar. According to SWIFT data, the proportion of international payments in US dollars reached 49.1% in August 2024. As the core dollar payment clearing infrastructure, CHIPS and Fedwire handle the vast majority of cross-border dollar payments. As a large number of cross-border dollar payment activities rely on these mature infrastructures, market entities have significant efficiency advantages when using the US dollar for cross-border settlements[7]. However, adopting alternative solutions often faces higher technical and transaction costs. The resulting network effect further consolidates the core position of the US dollar in international payments.

### **2.2 The Logic of the Internationalization of the Renminbi**

In today's international environment, the monetary competitiveness among major countries is mainly reflected in the competition of key technologies and institutional quality, which affects the evolution of the international monetary pattern. The digital revolution is accelerating, and digital technologies are being widely applied in the financial sector, such as sovereign digital currencies, digital financial regulation, and digital financial businesses. These technologies drive financial business innovation and change transaction models, and will have an impact on the cross-border pricing and settlement mechanism of international currencies as well as the reconstruction of the international monetary system. Promoting the wide application of the digital Renminbi in cross-border transactions is conducive to facilitating its international use. However, at the same time, it may also affect the market share of commercial banks and the transmission effect of monetary policies, bring risks and challenges to

the financial system, affect the stability of the currency value, and thereby restrict its internationalization process[8]. From a long-term historical perspective, the technological conditions in a specific historical period have profoundly influenced the way global strategic resources are allocated. However, the technological level of the world today has undergone significant changes[9]. The geographical and spatial characteristics of different countries vary significantly, which is reflected in the strategic path selection for promoting currency internationalization.

Although changes in the external financial environment may create opportunities for the use of the Renminbi in certain regions or scenarios, they may also increase the instability of the financial market[10]. Meanwhile, the evolution of the global economic landscape may bring about a more complex international economic and trade environment, affecting international investors' confidence in Renminbi assets. Compared with the internationalization conditions of some currencies in history, the current environment faced by the internationalization of the Renminbi is a coexistence of historical opportunities and risks and challenges, with an increase in external uncertainties[11]. Therefore, it is necessary to fully recognize the long-term and complex nature of this process, actively explore a path of currency internationalization that suits one's own characteristics, balance development and security, advance steadily and prudently, and achieve sustained efforts and long-term progress.

### 2.3 Pathways for the Internationalization of the Renminbi

At present, relying on the advantage of large-scale trade, the Renminbi drives the demand for cross-border use of the Renminbi. Following international trade rules and standards, the internationalization degree of the Renminbi is continuously enhanced through the Society for Worldwide Interbank Financial Telecommunication system and the Cross-border Payment System of the Renminbi. Despite having achieved remarkable accomplishments that have attracted worldwide attention, the internationalization degree and contribution of the Renminbi currency are still limited compared with other major currencies. This is mainly manifested in the insufficient acceptance of the Renminbi in the international market, a

relatively small proportion of the Renminbi in global foreign exchange reserves, and a low usage frequency of the Renminbi in international transactions and financial activities[12]. The digital Renminbi is essentially the digital form of legal tender. It retains the credit endorsement and state guarantee of traditional currency while integrating the convenience and efficiency of modern information technology. Compared with traditional currencies, digital currencies are not only supersaturated, but also have lower costs, higher transaction efficiency and better security[13]. It can be independent of the SWIFT system when necessary, providing an innovative alternative solution for international payment and settlement. Promote payment activities among multiple currencies, ensure the smooth progress of world trade and international exchanges, and provide flexibility and efficiency for international trade and international communication. Therefore, under the current global monetary landscape, the development of the digital Renminbi is not only a manifestation of technological innovation but also an important supplement and potential transformation to the existing international financial system[14]. It meets the diverse monetary and payment demands of the world, reduces potential costs and risks, and is expected to achieve a leapfrog development in the internationalization of the Renminbi.

The research and development as well as the pilot program of the digital Renminbi mark an important step in the digital transformation of currency. The development of the digital RMB is an inevitable choice in line with the trend of the digital era, representing a more advanced stage of the information revolution and marking the deep integration of fintech and monetary forms. The innovative application of the digital Renminbi can enhance the efficiency and security of currency circulation, while strengthening the autonomy of national financial security. Facing the trends of global economic integration and regional economic blocs, prudently promoting the digital Renminbi will provide new impetus for the stable growth of China's and even the global economy, and ensure seizing development opportunities in the volatile international environment. China has long begun the research and development of the digital Renminbi and has conducted pilot projects in cities such as Suzhou, Shenzhen and Xiongan New Area[15]. If substantial progress

can be made in the future in areas such as international cooperation and supervision of digital currencies, data security and privacy protection, it will surely greatly enhance the say in the formulation of global digital currency rules in the future, thereby promoting the construction of a new international monetary pattern with the digital Renminbi at its core.

### 3. Current Status and Opportunities

#### 3.1 Current Status of the Internationalization of the Renminbi

Since China launched the pilot program for cross-border trade settlement in Renminbi on July 1, 2009, the internationalization of the Renminbi has evolved from disorder to order, from sporadic to large-scale, from single-purpose to multi-purpose, and from small-scale to large-scale. In the commodities sector, China has listed 23 internationalized futures and options products denominated and settled in Renminbi, including crude oil, iron ore, and purified terephthalic acid[16]. In terms of cross-border payments, the total volume of Renminbi cross-border payments reached 52.3 trillion yuan in 2023, representing a year-on-year increase of 24%. Among these, payments under the current account totaled 14 trillion yuan, up 33% year-on-year; while payments under the capital account reached 38.3 trillion yuan, up 21% year-on-year (People's Bank of China, 2024). In terms of infrastructure development, the Cross-border Interbank Payment System has 160 direct participants and 1,413 indirect participants, with 1,051 in Asia (including 560 within China), 244 in Europe, 53 in Africa, 25 in North America, 20 in Oceania, and 20 in South America (CIPS, 2024). In foreign exchange transactions, the renminbi accounted for 7% of global transactions in 2022, ranking fifth (BIS, 2022). Domestic Renminbi foreign exchange transactions enabled direct trading with 22 foreign currencies and regional trading with 4 foreign currencies (China Foreign Exchange Trading Center, 2024). In terms of investment and financing, by the end of 2022, the outstanding amount of Renminbi international debt securities reached USD 173.3 billion, ranking 7th globally, an increase of 2 positions compared to the previous year (People's Bank of China, 2023). In October 2024, the Renminbi accounted for 5.77% of global trade financing, ranking second after the US dollar (SWIFT, 2024).

In terms of international cooperation, China has established 35 offshore Renminbi clearing banks in 32 countries and regions; signed bilateral renminbi settlement cooperation agreements with Belarus, Russia, Laos, Indonesia, and Cambodia; signed the Memorandum of Understanding on Promoting Bilateral Renminbi Transaction Cooperation Framework with Thailand, the Memorandum of Understanding on Promoting Bilateral Renminbi Settlement, Renminbi Swap, and Cross-border Payment Interconnectivity Cooperation with Vietnam, and the Memorandum of Understanding on Establishing a Cooperation Framework for Promoting Renminbi Settlement for Current Account Transactions and Direct Investment with Malaysia (Maldives); Memorandum of Understanding on Establishing a Cooperation Framework for Promoting Local Currency Settlement in Current Account Transactions and Direct Investment; Signed bilateral local currency swap agreements with over 40 central banks or monetary authorities overseas, with 31 valid agreements currently in place, totaling approximately 4.16 trillion yuan; Participated in the Renminbi Liquidity Arrangement initiated by the Bank for International Settlements (BIS), providing liquidity support to other central banks participating in the arrangement to address financial market volatility [17]. In terms of international reserves, the Renminbi's share of the Special Drawing Rights (SDR) has increased from 10.92% to 12.28%, with global central banks holding reserves of 245.17 billion US dollars, accounting for 2.14% (IMF, 2024), and the renminbi has been included in the foreign exchange reserves of over 80 overseas central banks or monetary authorities.

Since the launch of the pilot program for cross-border RMB transactions, the internationalization of the Renminbi has been steadily advancing. Over the past decade, the international value system of the Renminbi has gradually become more robust, its role in international investment and financing has stabilized, its role as an international reserve currency has strengthened, and the scale of Renminbi usage has continued to expand. According to a report released by the Society for Worldwide Interbank Financial Telecommunication, as of April 2024, the Renminbi accounted for 4.52% of global payments, ranking as the fourth most widely

used payment currency globally. As China's economic strength continues to grow and its international influence expands, the internationalization of the Renminbi has achieved a series of accomplishments, with its functions as an international pricing and settlement currency, an investment and financing currency, and an international reserve currency all being enhanced[18]. At the same time, intensifying geopolitical conflicts and great power competition have added many challenges and uncertainties to the internationalization of the renminbi, while also heightening the urgency of its internationalization.

### 3.2 Opportunities

The internationalization of the Renminbi is inseparable from high-quality trade development and high-level financial openness. In the digital economy era, China regards cutting-edge technologies such as digital technology as important driving forces for national development, striving to break free from the international market's perception of "Made in China" as low-quality and low-value through independent innovation. It aims to provide a solid microfoundation for the internationalization of the Renminbi through advanced manufacturing and services. Currently, the digital economy accounts for 41.5% of China's GDP, and its comprehensive innovation capability ranks 12th globally. The enhancement of independent innovation capabilities has promoted the optimization of the trade structure. In the first half of 2023, China's total goods imports and exports reached US\$2.92 trillion, with the proportion of high-tech products continuing to rise. The scale of digital service trade receipts and payments increased from US\$185.1 billion to US\$335.5 billion, with its global share rising from 3.4% in 2013 to 5.1% in 2022. The transition from a trade powerhouse to a trade superpower will strengthen China's ability to use intellectual property rights to secure currency, expanding the functions of the renminbi in pricing and settlement. According to SWIFT statistics, the Renminbi's share in global payments has exceeded 3% on multiple occasions in 2023.

In terms of cross-border circulation, China is providing an increasingly comprehensive payment ecosystem and application scenarios for the Renminbi. China has a large number of Internet companies, and the digital ecosystems

created by technology companies such as Tencent and Alibaba have long since broken through national borders, allowing digital payment and digital finance scenarios such as UnionPay, WeChat, and Alipay to penetrate many overseas countries, forming a huge, invisible digital currency zone. More importantly, China is actively establishing alternatives to the current US-dominated international payment system.

Building regional currency partnerships is an important component of the internationalization of the Renminbi. As the digital economy continues to deepen, the construction of the Digital Silk Road further facilitates the deepening of partnerships among countries along the route and the expansion of Renminbi application scenarios. The Digital Silk Road proposes a new model of globalization that integrates online and offline interactions, aiming to drive international dialogue through a regional cooperation ecosystem network based on information technology public services[19]. The technological cooperation brought by the Digital Silk Road has not only further stimulated the genuine demand for the renminbi in settlement and investment and financing, but also provided excellent technological tools and scenarios for the internationalization of the renminbi through electronic payments, fintech, and other means. Currently, the renminbi has a significant currency anchor effect in countries along the Belt and Road initiative, with approximately 30 countries, including Russia, India, Venezuela, Turkey, Saudi Arabia, and Iran, having announced the use of the renminbi for settlement.

### 3.3 Challenges

In the context of digital transformation, the internationalization of the Renminbi faces standardization issues, making it difficult to achieve unified digital financial regulations. Financial markets in different countries and regions have significant differences in terms of digital infrastructure, technical standards, and data formats. Financial institutions may encounter various issues when conducting cross-border transactions using the Renminbi. For example, in cross-border trade, the formats and certification standards for electronic documents vary across countries, leading to difficulties in information exchange and sharing, which to some extent increases transaction costs and time. Additionally, there are currently no unified

standards or regulations for the collection, storage, and transmission of financial data, resulting in compromised data quality and usability. Inconsistencies in system interfaces and communication protocols between different financial institutions also hinder the swift flow and efficient allocation of funds. Issues related to standardization may hinder the progress of Renminbi internationalization, making it challenging to achieve seamless integration and efficient coordination in cross-border financial services.

Capital flow restrictions are a series of measures implemented by a country to maintain financial stability and economic security by limiting cross-border capital flows. While these restrictions may help stabilize domestic financial markets to some extent, they also indirectly weaken the international attractiveness of the renminbi. Compared to developed countries, China's financial markets currently have relatively low levels of openness, characterized by high barriers to market entry, insufficient financial product innovation, and incomplete market regulatory mechanisms. These issues have weakened the Renminbi's competitiveness in international financial markets. An open and developed financial market is a crucial pillar for the internationalization of a country's currency. Although the government is gradually relaxing capital account controls and actively promoting the opening up of financial markets, under the influence of economic pressures and financial market volatility, the government may temporarily strengthen restrictions on capital flows to prevent capital flight and maintain economic stability, which to some extent limits the internationalization process of the renminbi.

In the face of the digital transformation wave, as part of the process of Renminbi internationalization, cross-border trade by enterprises still faces challenges related to technical compatibility and data security risks, which to some extent hinder the deep integration of global trade and financial markets. In the current global economic system, different countries and regions adopt varying financial standards, payment protocols, and data processing formats, leading to complexity and uncertainty in system integration during cross-border transactions. Taking commercial bank document centers as an example, as an important force driving the internationalization of the Renminbi, they must achieve system

interoperability with financial institutions worldwide when handling international settlement and trade financing businesses[20]. However, due to differences in financial systems across countries, financial institutions must overcome technical barriers to ensure that transaction instructions are accurately received and executed during Renminbi cross-border payments. The technical compatibility challenges in this process should not be underestimated. The high concentration and liquidity of data also present unprecedented security challenges. On one hand, cross-border transactions involve sensitive information such as customer identity data, transaction records, and financial data. If such information is leaked or maliciously tampered with, it could adversely affect corporate reputation and customer trust. On the other hand, cyberattack methods are complex and diverse. If hackers exploit system vulnerabilities for illegal operations, it could threaten the stability of financial activities.

#### **4. Path Selection**

The development path of currency internationalization is a gradual process that progresses from simple to complex. From the perspective of international currency functions, it must possess three key characteristics: international universality, stability and security, and free convertibility. Although the conditions required for currency share certain commonalities, different currencies may follow distinct paths in achieving internationalization. From the perspective of international currency functions. From the current development status of the Renminbi's internationalization, the evolution path of the Renminbi's international currency functions may break through the traditional evolution model of pricing and settlement, international investment, international reserves and instead adopt a new evolution path where various currency functions develop relatively in parallel. Therefore, for the development path of the Renminbi's internationalization, one can start from the perspective of international currency functions, further strengthen currency functions, and thereby promote the internationalization of the Renminbi.

#### **4.1 Promoting the Opening up of Financial Markets**

Under the premise of improving the domestic

environment, and taking into account market demand for the renminbi, innovative financial products denominated in renminbi should be developed. Efforts should be made to improve the price formation mechanisms for exchange rates and interest rates, promote the two-way opening of financial markets, and gradually achieve capital account convertibility[21]. The international functions of a currency primarily refer to the extension of a country's domestic currency functions abroad. Therefore, whether a currency holds commodity pricing power is also considered an important measure of its internationalization level. The US dollar has long monopolized the pricing power for commodities like oil, severely hindering the development of the Renminbi's international functions.

A well-developed and efficient domestic financial market is undoubtedly a necessary prerequisite and important guarantee for the internationalization of the Renminbi. A country's currency requires a financial market as the foundation for capital flows between nations, and a convenient trading environment is a means to encourage other countries to use its currency. The offshore Renminbi market can serve as the primary channel for the development of the Renminbi's international market, while the domestic financial market relies on the government's strong reforms support[22]. Currently, China's financial markets still have many shortcomings, such as outdated risk-averse management concepts corresponding to stringent market access conditions, distorted financial market structures, and mismatched debt financing market structures. Due to the existence of economic lags, these shortcomings cannot be fully addressed in the short term.

Therefore, it is necessary to improve the financial transaction network with key countries or regions. "Financial connectivity" is an important medium for ensuring the high-quality internationalization of the Renminbi. First, we should improve the soft infrastructure of Chinese financial institutions to enhance their ability to serve peer institutions, corporate users, and individual users. At the same time, we should raise the capital adequacy requirements for systemically important banks in China to strengthen their ability to withstand financial risks. Second, while enhancing the ability to withstand financial risks, we should steadily and cautiously advance the opening of the capital

account to expand channels for overseas entities to trade and invest in the renminbi, thereby enhancing the Renminbi's appeal to overseas entities. Third, it is necessary to clarify the respective objectives, positioning, and functional divisions of the Shanghai International Financial Center, which is being steadily developed, to facilitate effective cooperation and healthy competition.

#### **4.2 Promoting Regional Currency Cooperation under the Belt and Road Initiative**

The integration of RMB internationalization with the Belt and Road Initiative can be approached from two angles: first, by introducing supporting policies to expand the scope of Renminbi usage along the Belt and Road routes and enhance its recognition. Whether a country's currency functions as an international medium of exchange is an important criterion for assessing the strength of its internationalization. To genuinely enhance the internationalization of the Renminbi, expanding its usage in international financial transactions and cross-border trade settlements is the most effective approach. Policies should be implemented to facilitate the use of the Renminbi by Chinese enterprises engaged in investment and trade within the Belt and Road regions. Second, establish and improve clearing centers and offshore financial centers along the Belt and Road routes. The main offshore Renminbi markets are located in London, Singapore, and other regions. As investment and trade activities between "Belt and Road" countries and China become increasingly frequent, the growing volume of Renminbi transactions not only necessitates the development of settlement centers and offshore financial centers along the "Belt and Road" route, but the successful establishment of these centers will also significantly facilitate the use of the RMB in the "Belt and Road" regions.

Although the Belt and Road initiative has provided a series of favorable conditions for the internationalization of the Renminbi, there are still many issues with the use of the Renminbi in the Belt and Road region, such as mismatches between cross-border Renminbi usage and trade and investment needs in Belt and Road countries, regional development imbalances, and functional development inconsistencies. The inherent economic and financial environments of

countries along the Belt and Road route are relatively underdeveloped, with insufficient infrastructure and low levels of economic development, all of which hinder the renminbi from becoming the trade settlement currency in the Belt and Road region. Moreover, these issues are largely long-term structural problems that cannot be resolved overnight.

Therefore, under the Belt and Road Initiative, it is necessary to implement measures to promote trade facilitation and further accelerate the construction of new competitive advantages for China's export trade. The experiences of the German mark and the Japanese yen in internationalization both indicate that maintaining an advantage in export trade is crucial for currency internationalization. Trade is the cornerstone of the internationalization of the renminbi. It is essential to steadily increase China's trade volume, enhance the volume of renminbi trade settlement, and thereby elevate the influence of the renminbi. At the same time, it is important to improve the foundational institutional arrangements for the cross-border use of the Renminbi, simplify cross-border Renminbi settlement processes, reduce related fees, and provide more guidance and support to encourage enterprises to use the Renminbi for cross-border settlements[23]. It is also necessary to accelerate the development of offshore Renminbi markets by optimizing the network layout of Renminbi clearing banks and fully leveraging the role of currency swap mechanisms to enhance market liquidity and interoperability. By continuously improving the Renminbi liquidity supply mechanism in the offshore market, actively expanding the range of Renminbi risk management tools and financial products, and meeting the market's diversified needs for risk management and asset allocation, the share of the Renminbi in international payments can be increased, thereby playing an important role in promoting Renminbi internationalization.

#### **4.3 Promote Cross-Border Mergers and Acquisitions to Drive Capital Outflows**

The “capital outflow + cross-border mergers and acquisitions” approach is based on the overall international environment, where capital outflow can drive foreign trade and promote the internationalization of capital. On the one hand, from the perspective of capital-exporting countries, they can demand that capital-

importing countries open ports, build terminals, and reduce tariffs; force capital-importing countries to make concessions in trade agreements; control the key economic sectors of capital-importing countries; and drive the export of goods from capital-exporting countries, with “capital inflow becoming a means to encourage goods exports.” On the other hand, from the perspective of capital-importing countries, capital outflows can influence the level of economic development in capital-importing countries, accelerating the development of their real economy and financial sector. Moreover, capital outflows in the form of cross-border mergers and acquisitions can bring new scientific and technological advancements and management concepts to capital-importing countries, facilitating industrial upgrading and transformation, enhancing the level of economic development, deepening financial development, and enabling the economy of capital-importing countries to achieve comprehensive and balanced growth.

We should deepen reforms to the Renminbi exchange rate formation mechanism to ensure that market mechanisms play a decisive role in exchange rate formation. This requires enhancing the marketization of the exchange rate formation mechanism to allow market supply and demand to more accurately reflect the value of the Renminbi. This will not only enhance the flexibility and resilience of the Renminbi exchange rate, boost international market confidence in the RMB, but also effectively respond to external economic and financial shocks, providing a more solid foundation for Renminbi internationalization. As China's financial opening-up process continues to advance, the opening of the bond market has opened up broader channels and markets for Renminbi internationalization. China has developed into the world's second-largest bond market. The renminbi bond market, with its advantages of low financing costs and a favorable institutional environment, continues to provide renminbi assets with high liquidity and safety, attracting an increasing number of overseas institutions and international investors. Among these, “panda bonds” remain highly popular and play an important role in promoting the internationalization of the Renminbi.

Continuously advancing financial market opening and appropriately accelerating the pace of capital account liberalization, while attracting



more overseas investors to participate in China's financial markets through the QFII and RQFII systems. At the same time, further support should be provided for the development of the offshore renminbi market, attracting more enterprises and institutions to participate through tax incentives and other measures, while enriching offshore renminbi financial products to promote the internationalization of the offshore renminbi market.

Therefore, the path of “capital inflow + cross-border mergers and acquisitions” for the internationalization of the RMB is undoubtedly a mutually beneficial choice. Moreover, looking back at history, it can be observed that, apart from the euro, which adopted regional monetary integration as its path to internationalization, other currencies such as the US dollar and the British pound, during their early stages of internationalization and when their domestic financial markets were not yet fully developed, all chose the path of “capital outflow + multinational corporations.”

## 5. Conclusion

This paper first reviews the relevant literature on the internationalization of the Renminbi in the context of digitalization. Based on existing data, it provides a detailed discussion of the current development status, challenges, and opportunities and challenges faced by the internationalization of the Renminbi.

Through research on the above content, it explores the path selection for the internationalization of the Renminbi in the context of digitalization and draws the following conclusions: First, in the digital age, the internationalization of the Renminbi holds advantages. The emergence of new digital technologies has created advantages over traditional paper currency in terms of aggregation, first-mover advantage, digital development opportunities, and platform advantages. Second, from the perspective of path selection for the internationalization of the Renminbi, the internationalization of the Renminbi should adopt the “capital outflow+multinational corporations” model.

This paper proposes the following recommendations: First, enhance the ability to use digital technology to safeguard monetary sovereignty. The internationalization of the Renminbi must both consolidate existing achievements and advance cautiously, while also

seizing opportunities and taking proactive measures. This requires a stronger foundation of economic security, national defense security, and enhanced international political influence. On one hand, we must continuously enhance the resilience and security of industrial chains and supply chains, strengthen the cultivation of high-end talent and attractiveness to overseas talent, and continuously mitigate the substantial impacts caused by U.S. sanctions and technological blockades. On the other hand, we must ensure the stable and smooth operation of cross-border financial systems through repeated technical verification, establish routine collaborative regulatory mechanisms with partner countries, and effectively address cyberattacks, fraud, money laundering, data theft, and other activities initiated by hegemonic nations and foreign extremist forces. Second, we must promote the construction of a competitive international financial market and enhance the influence and voice of the Renminbi and digital Renminbi in the international financial market. In the digital economy era, the impact of technological innovation on a country's economic strength has further deepened. Therefore, we must promote the continuous advancement of China's industrial system through the deep integration of the digital economy and the real economy, create more brands and technological products with international leading positions, enhance China's economic hard power and value, strengthen China's central role in the Asian industrial chain and even the global industrial chain, consolidate new advantages in foreign trade supported by technology, quality, service, and standards, and accelerate the construction of a trade powerhouse.

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