RMB Internationalization Using Novel Bottom-up Approach, Vision-2030

Syed Adnan Shah*, Ufaq Adnan[b] and Yiming He
Ocean University of China, Qingdao, Shandong, China
*shahadnansyed@gmail.com; Ufaqadnan@gmail.com

Abstract. In this manuscript, we have framed key strengths of Chinese economy and how China can accelerate the pace of Renminbi (RMB) internationalization using a novel "bottom-up approach". We have discussed about options China have to internationalize its currency and to what extent they are workable. We have proposed a model "Vision 2030", explaining how to internationalize RMB without losing control over "Capital Mobility" and avoiding "Exchange Rate Volatility", while RMB aiming to progress on path as second best option for international unit of account, medium of exchange, and store of value. An "Implementation Matrix" is supplemented to ensure the execution of proposed model. We have explained vital pre-requisites, which include strengthened digital financial market, aspects associated with Supply Chain Management and optimum utility of Network Externalities.

Keywords: RMB Internationalization, Bottom-up Approach, Capital Mobility, Exchange rate volatility.

1 Introduction

A desire "to become everything one is capable of becoming" [1]. Nations are; humans with aligned mental approach, living in geographical boundaries. Maslow theory of "Hierarchy of Needs" and human desire to reach "Self-Actualization" level, equally applies to nations. Those nations which have achieved a certain level of self-reliance, development, dominance and economic prosperity have historically attempted to internationalize their currency. Since the 15th century, the currencies of Portugal, Spain, the Netherlands, France, United Kingdom, and United States of America (USA) have in succession played a role as a leading international currency. In the late 20th century, in addition to the dominant role of the US dollar, the Japanese yen, the German deutsche mark, the Republic of Korea's won, the Singapore dollar, and more recently, the euro have played some role as international currencies [2].

Internationalizing a currency refers to making it widely used as a unit of account, medium of exchange, and store of value outside of its country of issue for any country, especially for large trading nation dealing in foreign exchange. In the private sector, it is used to invoice and settle international trade in goods and services, as well as to denominate bank deposits and financial assets abroad [3]. It is utilized by foreign central banks as a reserve currency in the public sector.

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China is most likely the first nation in history to attempt currency internationalization without being regarded as one of the most developed. A nation that issues its own currency has historically needed to have a sizable, dependable, efficient, and liquid financial market. These characteristics are typically connected to affluent nations. With the potential to surpass the US as the largest economy in the near future, China stands out as the world's developing country. However, when compared to the most developed nations, its financial system is still getting mature and needs to develop in terms of liquidity, breadth, depth, efficiency, and reliability.

China has several reasons for attempting to make the RMB more widely used. Firstly, there are numerous issues with the IMS, which is dominated by the USD as the primary reserve currency. It is asymmetrical in that emerging nations like China lose their independence in monetary policy as they attempt to peg to the USD. Secondly, China built up a sizable foreign exchange reserve in USD at a very low interest rate, vulnerable to losses from USD depreciation, in an effort to maintain the dollar peg. Meanwhile, for the past forty years, the US has consistently maintained sizable current account deficits. In crux, the US is borrowing money from nations like China at extremely low interest rates by virtue of its unique status. Thirdly, the global financial crisis that occurred between 2007 and 2009 led to a shortage of dollars globally. This gave China even more reason to take advantage of the opportunity to promote RMB usage overseas in order to eventually escape the "dollar trap."

Currency internationalization conventional open-economy trilemma states that maintaining monetary policy autonomy is impossible if both; stable exchange rate and significant control over capital mobility is to be attained [4]. So, why is it not workable for China? Because China is unlikely to give up capital controls due to potential consequences of high capital mobility. Furthermore, financial market's development into a broad, deep, and liquid market is probably going to take good enough time. Lastly, market oriented foreign exchange rate will likely bring appreciated RMB resulting in steep decline in exports can result in likewise situation caused after the “Plaza Accord” signed between Japan and USA in 1985, which resulted in “Lost Decade of Japan”.

Since the commencement of "reform and opening" in 1978, China's economic progress has been greatly aided by international trade. China has plenty of cheap labor available, but in the initial stages of its reform and opening, it lacked capital. China's trade processing and involvement in the global value chain (GVC) was subject to Chinese currency being pegged to USD. This exchange rate policy helped China become a major player in international trade very quickly.

Thus, foundation of China's initial development strategy has been an undervalued and stable exchange rate with the US dollar. However, this policy becomes a barrier to the internationalization of the RMB, which necessitates China allowing far more liberal capital mobility. China will have to give up exchange rate stability to some extent to internationalize its currency. But why is it not ready to do so? Because! speculators are expected to be involved in capital mobility, as they were in the most recent Asian Financial Crisis, and it will likely result to jolt the economy, which raise doubts and ultimately stir up public unrest.

In keeping with the idea of "one country, two systems," the Chinese government decided to create an offshore RMB market that is not completely integrated with the onshore one. The currency is fully convertible in the offshore market through establishment of RMB centers offshore in Taipei, Hong Kong, Singapore, London, etc. Markets for bank deposits, bonds, loans, and other financial goods denominated in CNH, eventually arose in the offshore centers. Though, the onshore capital account still lacks complete convertibility, consequently, market forces by themselves are unable to elevate the RMB to the status of a major international currency. Capital account liberalization is being achieved through initiatives such as the Shanghai-Hong Kong Stock Connect, Shenzhen-Hong Kong Stock Connect, Bond Connect, Mutual Fund Connect, Shanghai Free Trade Zone (FTZ), Shenzhen Qianhai FTZ, and others.

There are few grounds for pessimism in the path towards RMB Internationalization. Firstly, Chinese working age and labor force started to decline in 2012, having a significant effect on economic expansion. Without continuous economic growth, it will be hard for RMB to achieve the market thickness needed for internationalization. Secondly, China is unlikely to give up capital controls in the onshore market anytime soon due to its extreme caution regarding the potential consequences of high capital mobility. Third, the onshore market's development into a broad, deep, and liquid financial market is probably going to take some time. Even with China's anticipated economic size, the RMB may not be able to match status of the USD as a payment currency due to China's underdeveloped institutions making it difficult for China to reach at par to US in financial market development and capital account openness. Fourth, China has to win over foreign confidence in order to become a "safe-haven currency".

There are, however, reasons to be optimistic. China's economy has the size advantage because it is expected to surpass the US economy in the near future {(although China is currently wealthiest country in terms of GDP (PPP)}, even if growth may slow down. Moreover, China has stronger incentives to internationalize its currency as China intends to use its outward obligation to force interior restructurings, but countries like Japan did not have the same motivation. It aims to be less dependent on the US and USD-based IMS, and it can compel domestic financial sector reform through the external commitment that comes with RMB internationalization. Lastly, due to the rapidly expanding economies of developing nations, the United States' GDP share of the global economy will gradually decline, making it increasingly difficult for USA to provide the reserves and payments that the rest of the world requires. So, it is evenly possible that world will adopt a multipolar system where the three main reserve currencies are the USD, RMB and Euro.

Does China have an alternative model, which can lead to RMB Internationalization without losing control on capital mobility and avoiding exchange rate volatility? This document is designed to look into the prospects and prerequisites for the success of RMB internationalization answering the above stated question. We have proposed a novel model “Bottom-up Approach - Vision 2030”. However, before getting into details of proposed model, we have carried out a SWOT Analysis of Chinese economy with respect to RMB internationalization for better understanding the situation.

2 Literature Review

RMB internationalization refers to the process by which RMB can be used across national boundaries and how can it become an internationally recognized pricing, settlement and reserve currency. Its importance lies in enabling China to gain a greater political and economic voice in the world. By making China more proactive in the world's economy, its voice in the financial system will also be greatly enhanced. The benefits of RMB Internationalization include reduced exchange risk, promotion of the development of the financial market, and expansion of firms in the People's Republic of China. Although both economic and political factors work in currency internationalization, economic determinants remain central [5].

According to the "2023 RMB Internationalization Report" released by the People's Bank of China, from January to September 2023, the amount of cross-border RMB receipts and payments was 38.9 trillion yuan, a year-on-year increase of 24%. According to data from the Society for Worldwide Interbank Financial Telecommunication (SWIFT), in September 2023 [6], the RMB accounted for 5.8% of global trade financing, a year-on-year increase of 1.6 percentage points, and its ranking rose to second place. A 2022 survey by the Bank for International Settlements (BIS) [7] shows that the share of RMB foreign exchange transactions in the global market has increased from 4.3% to 7% in the past three years, and its ranking has risen from eighth to fifth. New RMB clearing banks have been established in Laos, Kazakhstan, Pakistan, and Brazil, and 30 countries have signed currency swap agreements with China.

The manuscript provides a detailed introduction on background for further discussion on the currency internationalization. This paper elaborates the SWOT analysis of Chinese economy with respect to RMB Internationalization, later part is about main components of Vision 2030 of RMB internationalization. Third part is discussion on the practicality of proposed implementation matrix. The final part outlines the conclusions and further research dimensions.

3 SWOT Analysis of RMB

A brief analysis of Strengths, Weaknesses, Opportunities and Threats of Chinese economy has been crafted below to better understand the prospects and limitations faced in RMB Internationalization.

3.1 Strengths

China being the largest population and second largest economy having nominal Gross Domestic Product (GDP) of USD 17.5 trillion which marks it the second largest economy, while its Purchasing Power Parity (PPP) GDP of USD 31 trillion, rank it to the top wealthiest country [8].

China accounted for 19% of the global economy in 2022 in PPP terms and China was the largest recipient of foreign direct investment in the world as of 2020 [9], receiving inflows of $163 billion. Moreover, in 2022 China share in global trade exceeds

14% being the largest exporter in the world trade, Whereas, United States (8% of world trade) and Germany (7%) were ranked in second and third positions [10].

China is in the advance stage of developing a digital currency of the Central bank. The digital yuan National bank produced for a couple of years is tested in the country. China has great potential strength in network externalities by utilizing its global supply chain network and extensive online selling applications. Which technically place it in a position to utilize the network for confidence building of general public and penetrating at the grass root level around the globe. It can be an effective tactic for RMB internationalization as bottom-up approach. The digital yuan is ready to launch in like-minded countries.

3.2 Weaknesses

One of the important requirements for currency internationalization is full convertibility of capital account, which is not at this point of time practical in case of China. Therefore, this factor opposes the RMB's internationalization. This may limit access to yuan for use in international financial transactions and pose challenges for foreign investors.

China does not want to lose its control over the capital mobility; moreover, volatile foreign exchange rate could also call unrest in the general public as well speculators to shift the tilt of investment from China to other potential countries.

3.3 Opportunities

China has tried to hedge its economic saturation point through four key global initiatives (4GI's): The Belt and Road Initiative (BRI), the Global Development Initiative (GDI), the Global Security Initiative (GSI), and the Global Civilization Initiative (GCI). China had signed bilateral local currency swap agreements with 30 BRI participating countries and established RMB clearing arrangements in 17 BRI participating countries (PBOC Sept 2023- Report on RMB Internationalization) to deal in RMB for cross border transactions instead of other leading currencies.

As of August 2023, 155 countries were listed as having signed up to the BRI [11]. The participating countries include almost 75% of the world's population and account for more than half of the world's GDP [12]. China had signed bilateral local currency swap agreements with 30 BRI participating countries and established RMB clearing arrangements in 17 BRI countries [13]. GDI and BRI has encouraged several countries to have development projects in coalition with China. It will exponentially enhance dealings in RMB; not only for specific projects but also for bilateral trades as well.

China is attempting to internationalize its currency in a way that is distinct from other countries, namely by implementing the “one currency, two markets” strategy, which is a novel way to mitigate volatility in its financial sector. China firewall allows full convertibility of RMB in the offshore market but partial convertibility in the onshore market, preventing currency exchange rate swings between the onshore and offshore markets [3]. Increase of the share of Chinese national currency in cross border transactions and reserves is inevitable, due to its ginormous share in international trade.

RMB can be considered a great long-term alternative to the US dollar and euro. China has great potential strength in network externalities, its sophisticated global supply chain network complimented by extensive online selling applications, naturally place it in a position for penetrating at the grass root level around the globe.

3.4 Threats

China during its attempt to RMB Internationalization may reduce the role of the dollar in the world. The role of other leading currencies will gradually decrease its dominance as main currencies for international trade, which may lead to political and trade rift between leading currencies holders and China. Leading economies may pay more attention to China's plans to implement digital currency and; "counter RMB Internationalization" tactics may pop up.

China being a developing country, hence its financial institutions are still immature compared to the more developed systems in the West. Full Integration of Chinese financial system with the West can bring extreme fluctuations in the financial markets. Market driven financial system can result in extensive capital outward flow and appreciation of parity rate, resulting in internal instability and public unrest. Because of concerns about extreme fluctuations in the financial markets, China has no intention of fully integrating its financial system with the West. This impacts the trading partners of China to lack confidence in ability of RMB as a mean of international settlement currency.

4 RMB Internationalization - Bottom-up Approach Vision 2030

Envisioning the RMB in year 2030 being the 2nd most important currency as the world reserve and most traded currency can be achieved through multiple options. The stated vision mainly addresses the apprehensions associated with; Capital Mobility and Exchange Rate fluctuations. It consists of 4 strategic objectives and 3 primary goals; as elaborated further in Fig. 1 below:

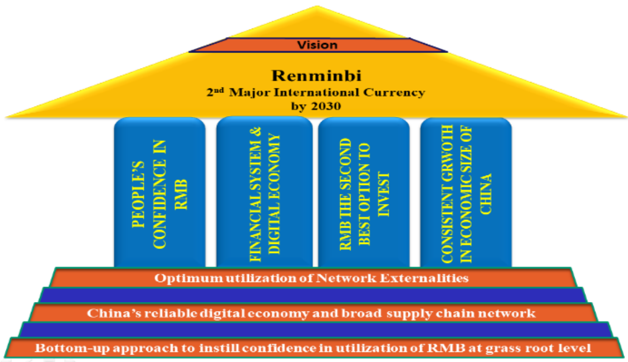

Fig. 1. RMB internationalization – bottom-up approach vision 2030. (Source: Authors' compilation)

4.1 The Four Pillars of Vision 2030

Peoples Confidence in RMB. An important aspect missing in the puzzle of RMB internationalization is the confluence of culture, ideology and philosophy of China from the Western countries. USA, Europe and most of the other developed nations share same ideology, culture, laws and regulations. Although, Chinese culture and history ways back to 5,000 years, but its true interpretation, exposure with the rest of the world and depiction of Chinese ideology of coexistence has never been carried out in befitting manner. Though it is better late, than never, now is the time to propagate the nature of Chinese philosophy, the secret of their unprecedented growth and its doctrine of prosperous world, is to be unveiled. Our following pillar will explain about the possible means to instill better confidence in the general public around the world.

Financial System and Digital Economy. Chinese advancement in technological arena is exponentially high, even the research and development are second best if not first in the world. This technological advancement in digital economy clubbed with the cheap production cost and broad supply chain management can complement the best possible scene for utilization of online selling/purchasing products at the grass root level of general public. It will encourage public to deal in online foreign exchange purchasing and retention of RMB as their savings. A detailed Implementation Matrix has been designed to ensure applicability of "Vision 2030" refer Fig. 1.

"RMB" The Second Best Option to Invest. USD hegemony has been coupled with historical events like World War – I & II, later exploiting vacuum in the world power race, taking opportunity at Bretton Woods Conference in 1944 and ultimately becoming the optimum medium of exchange and store of value through "Network Externalities" phenomenon. Tracking all these incidents and an extensive time frame it is not less than a miracle for China to reach 4th top most traded currency in November 2023 from just inclusion in Special Drawing Rights (SDR) basket in October 2016. Though, becoming the most competitive choice as International Currency is not beyond imagination, but realistically by 2030 we envision RMB as the second best option to invest by general public, financial institutions and countries at large.

Consistent Growth in Economic Size of China. The GDP growth rate in last 3 decades and poverty alleviation of more than 800 million people is unprecedented in the history of world. It merits the claim of the consistent forecasted 5% growth in economic size of China. The Chinese philosophy of "coexistence", "mutual development" and "inclusive world" [14] certifies the forecasted growth pattern of China by avoiding saturation point of its internal economy.

4.2 The Three Vital Pre-Requisites Towards Vision 2030

Optimum Utilization of Network Externalities. Network externalities are the result of the fact that when a currency is used by more people, the transaction cost of exchanging it decreases exponentially. China have vivid emerging strength in network externalities, through online product sales, digital currency (i.e. Alipay, Wechat, Alibaba, etc) and broad & deep Supply Chain Management network.

China's Reliable Digital Economy and Broad Supply Chain Network. China have practically implemented digital payment system at grass root level through eye scan and/or finger prints. It has been tried & tested and found not just applicable but effective, efficient and reliable. China has best shipment transportation and tracking system, complimented with the warehouses at strategic locations. Of course, this ginormous setup requires integration with rest of the world, synergized efforts to be made with inclusion of likeminded countries to identify achievable milestones (Implementation Matrix for details).

Bottom-up Approach to Instill Confidence in Utilization of RMB at Grass root Level. The Top-Down approach require liberalized Capital Mobility and Volatile Currency Exchange Rates, which is not a sage option for the largest sized population, who have recently came out from certain poverty to an uncertain prosperity. The alternative is the Bottom-up approach (Fig. 1), through which, penetration at the grass root level in likeminded countries using the implementation matrix will have "minute" but exponential impacts in a brief period of time.

5 Proposed Alternative– Bottom up Approach with Implementation Matrix

The following Table 1. "Proposed Implementation Matrix" serves as the crux of this whole document. If implemented, in "true letter and spirit", will lead to spontaneous domino effect towards RMB Internationalization.

Table 1. Proposed Implementation Matrix.

Sr.	Deliverable(s)	Implementing Agency(ies)	Remarks
1	Devise a broad logistics supply chain management system.	Alipay / State Owned Enterprise, etc.	With collaboration of local implementation partners of different countries. (Replicate model of strategic warehousing of Amazon, Alibaba, etc.).
2	Offering online shopping platforms.	JD, TaoBao, Pinduoduo, Maitwan, and other private organizations, etc.	All apps available in local languages. Incentive plan; including free registration, initial free purchase of 10 RMB or (xx amount in RMB) on introducing a friend, etc.
3	Online Foreign Exchange (RMB) Forex (sale / purchase) through certified agents.	Alipay, Wechat, etc.	Certification of agents to deal in foreign exchange on behalf of companies. Replicate the model of digital mobile applications for sale/purchase of digital currencies etc.
4	RMB digital saving accounts (Retirement plan, education plan, house building loans, car loan etc.).	People's Bank of China, etc. (Digital banking system of China).	Integration with local banks of different countries. Encourage savings in RMB by offering incentives (high returns and low interest). Creation of Domino effect through friend introduction.

Source: Authors' compilation (title of companies may vary in practice)

Following are the salient points and prerequisites for RMB Internationalization from Table. 1

5.1 Promote the Use of RMB in Friendly Countries Along the Belt and Road. Break the "chasing and interception" of the RMB by some countries, and give priority to promoting the use of the RMB in friendly countries along the Belt and Road. To this end, it is recommended that the People's Bank of China and the Ministry of Foreign Affairs take the lead in coordinating with likeminded countries to carry out a pilot project for RMB as a medium of exchange in Special Economic Zone(s), so that countries can allow investors to directly use RMB when settling commercial trade in Special Economic Zone(s).

5.2 Adopt a New "Bottom-up" Model. In order to get rid of the "impossible triangle" caused by traditional methods, it is recommended that the People's Bank of China take the lead, with the participation of the Ministry of Foreign Affairs, the Ministry of Commerce and other departments, give full play to China's network externalities and extensive supply chain network advantages, and implement a "bottom-up" RMB New approaches to internationalization (Fig. 1). The first is to improve the existing international logistics supply chain management system and international online shopping platform. This system should cooperate with suppliers in the country where it is located and benchmark international strategic warehousing models. At the same time, leading e-commerce platforms such as Alibaba and JD.com are used to promote cross-border e-commerce. E-commerce applications in each country must provide local language versions and launch incentive programs, such as free registration, free first purchase, and free gifts for introducing friends. Amount RMB, etc. The second is to allow digital renminbi to be traded in foreign exchange through state-certified foreign exchange agents, making it easier for foreign consumers to directly purchase renminbi for shopping on my country's e-commerce platforms. The third is to cooperate with overseas banks to provide RMB electronic savings accounts, and encourage locals to use RMB to save by providing incentives (high interest on deposits and low interest on loans, etc.), and the digital RMB account can be used for retirement plans, education plans, housing loans, car loans and other businesses.

5.3 Enhance the World's Confidence in the RMB. It is recommended that the People's Bank of China take the lead, with the participation of the Ministry of Foreign Affairs and the Propaganda Department, to create an image of the RMB as low-risk and relatively stable, and vigorously promote the RMB to be linked to China's complete and powerful industrial system. The anchor of the RMB lies in China's strong productivity. At the same time, China's philosophy and culture of "a community with a shared future for mankind" and "tolerance for the world" will be interpreted and promoted to the world. Combining China's global supply chain network and extensive e-commerce platforms, this approach can be used to build public confidence and penetrate into grassroots consumers in various countries.

6 Conclusion

Conventional Top-down approach advocates that China's sizable economy, its pledge to adequately free capital mobility, the expansion of a broad, deep, and liquid financial market, and the world's confidence in the RMB are the four primary forces behind RMB internationalization.

However, Bottom-up approach (Fig. 1) deliberates further estimations required on wide spread variables, assuming weighing people's confidence in RMB as the most weighted variable. Given China's substantial GDP, consistent forecasted growth, ongoing reforms, open-up policy, and the need for safe assets by central banks worldwide for foreign exchange reserves, will soon lead to a world having multiple reserve currencies, with the USD, RMB and Euro serving as the primary reserve currencies.

Although world have witnessed the Chinese consistent double digit GDP growth rate in last 3 decades, along with poverty alleviation of more than 800 million people, it is the lack of trust that prevents the RMB from becoming top most favorite currency of the world. Gaining the trust of the international community will require time and effort on China's part. The Chinese philosophy of "coexistence", "mutual development" and "inclusive world" merits peaceful growth and development of the world. Same has to be projected in a befitting manner in light of 4GI's of Chinese government, which is designed to avoid saturation point in the internal economy.

Finally, our proposed model at Fig. 1 demonstrates that a reliable and robust digital economy complemented with broad supply chain management will have "minute" but "exponential" impact on the RMB's payment share, ultimately pacing up RMB Internationalization. This being aligned without losing control on Capital Mobility and yet avoiding major fluctuations in the exchange rate. Therefore, China needs to open avenues to extensively utilize its reliable digital economy and accelerate its financial development to speed up RMB becoming a major international payment currency. Even only if the BRI countries increase use of RMB, as proposed in the implementation matrix, it can foster extended utility of RMB at grass root level and create positive vibes to encourage general public in utilization of RMB through saving plans, loan management, online purchasing platforms, etc. In parallel it can play an important role to project the message and ideology of China for collective growth, inclusivity and peaceful development for the whole mankind. Ultimately it can also have intangible benefit of boosting brand loyalty that is "Made in China" and fostering grassroots confidence, which will eventually aid in the internationalization of the RMB.

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