A Short Summary of This Book

Below I summarize each chapter and provide a diagram that summarizes the theoretical framework of the book.

Chapter 1 is the introduction. I discuss the current state of the international monetary system (IMS), the "exorbitant privilege" of the United States and the history of the IMS. I explain how the United States seized the opportunity in the Bretton Woods conference to establish the USD as the reserve currency, and how the Bretton Woods system collapsed in 1973. Today, under the post-Bretton Woods system, a developing country like China adopts the "dollar standard" and pegs its currency to the USD. In doing so, China accumulates huge amount of USD foreign reserves. It falls into the "dollar trap." However, the global financial crisis sounded an alarm for China that the dollar-based IMS could be quite unreliable – for example, there might be a shortage of the USD for trade finance. Thus, China began to accelerate the pace of RMB internationalization, aiming to make the RMB an international unit of account, medium of exchange, and store of value. However, this implies that its capital account has to be open, the financial market must be liberalized, and its exchange rate has to be more volatile. Is China ready to meet this challenge? This book investigates the necessary conditions for RMB internationalization to succeed and its prospects.

In Chapter 2, I explain why China desires a stable exchange rate. International trade has been very important to China's economic development ever since the "reform and opening" that started in 1978. In the early years of its reform and opening, China had plenty of cheap labor but very little capital. Thus, it opened its door to inward foreign direct investment (FDI), which brought in capital and technological know-how. China had a huge rural labor surplus (an underemployed rural labor force) that had to be absorbed by the economy.

Thus, it needed to keep its labor employed by expanding external demand through exporting. In order to sustain export-promotion during the period 1996–2005, China had been maintaining a stable and undervalued exchange rate versus the USD. In other words, China adapted to the dollar standard and made good use of it during its development process. As a result of this exchange rate policy, China rapidly became an important player in international trade. For example, its processing trade and its engagement in the global value chain would not have been so successful had China not pegged the RMB to the USD. A stable and undervalued exchange rate with the USD has therefore become the cornerstone of China's initial development strategy. This policy, however, becomes an obstacle in RMB internationalization, which requires that China allows much freer capital mobility. A very stable exchange rate and a high degree of capital mobility cannot be achieved at the same time if autonomy in monetary policy is to be maintained, according to the open-economy trilemma. So, in order to internationalize the RMB, China must give up a certain degree of exchange rate stability.

In Chapter 3, I discuss why China wants to internationalize the RMB. I define internationalizing a currency as making it widely used as a unit of account, medium of exchange, and store of value outside of the issuing country. In the private sector, it is used to invoice and settle international trade in goods and services and to denominate bank deposits and financial assets in foreign countries. In the public sector, it is used as a reserve currency in foreign central banks. There are multiple reasons that motivate China to try to internationalize the RMB. Here I list just a few. First, the IMS, which is dominated by the USD as the major reserve currency, has many problems. It is asymmetric in the sense that as developing countries like China try to peg to the USD, they lose their autonomy in monetary policy. Yet the United States has all the autonomy in monetary policy as it does not need to adjust its exchange rate of its currency against those of other countries. Second, as China wanted to safeguard the dollar peg, it accumulated a huge amount of USD foreign exchange reserve, which earned a very low rate of interest and was subject to losses due to USD depreciation. It triggered complaints from the Chinese people. At the same time, the United States has kept running large current account deficits year after year for four decades. Essentially, the United States is using its special status to borrow overseas at very low interest rates from countries like China. Third, the global financial crisis in 2007 – 2009 caused a shortage of dollars all over the world. This gave further impetus to China to grab the window of opportunity to promote the use of RMB internationally so as to eventually escape from the "dollar trap." China has two additional reasons to internationalize its currency, which countries like Japan did not have: a strong desire to become independent of the United States and an IMS dominated by the USD, and the desire to use external commitment to force internal reforms. I also discuss the pros and cons of RMB internationalization to China and to the world, and why Japan did not internationalize the yen.

In Chapter 4, I discuss China's strategy of internationalizing the RMB. China is probably the first country in history not considered among the most advanced trying to internationalize its currency. Historically, the financial market of a country that issues an international currency needs to be large, reliable, efficient, and liquid. These features are usually associated with a more developed country. China is special because it is a developing country that is expected soon to become the largest economy in the world. But its financial system is still immature compared with those of the most advanced countries, and still needs to improve regarding reliability, efficiency, breadth, depth, and liquidity. Moreover, its currency is still not fully convertible in the capital account. Thus, market forces alone would not be able to make the RMB a significant international currency, and government policy is required. Borrowing the "one country, two systems" idea, the Chinese government decided to create an offshore RMB market that is not completely integrated with the onshore one. They facilitated the formation of offshore RMB centers in Hong Kong, Singapore, Taipei, and London. The CNH (offshore RMB) is a fully convertible currency in the offshore market. In the offshore centers, the markets for CNH-denominated bonds, loans, bank deposits, and other financial products gradually developed. Trade settlement in RMB is allowed and even encouraged. China also entered into bilateral currency swap agreements with 36 countries as of March 2018. The capital account is gradually being liberalized through schemes such as Qualified Foreign Institutional Investor (QFII), Qualified Domestic Institutional Investor (QDII), RMB-Qualified Foreign Institutional Investor (RQFII), Shanghai–Hong Kong Stock Connect, Shenzhen–Hong Kong Stock Connect, Bond Connect, Mutual Fund Connect, Shanghai Free Trade Zone (FTZ), Shenzhen Qianhai FTZ, and so on. At the same time, China is increasingly building up its international interbank payment system, called the Cross-Border Interbank Payment System (CIPS), which clears and settles RMB-denominated payments. In this chapter, I explain how China gradually experiments with capital account liberalization and currency convertibility. I also discuss an "RMB Internationalization Index."

In Chapter 5, the importance of capital account liberalization is discussed. I explain how the "coalescing effect" and "thick market externalities effect" determine the use of a currency for trade invoicing and denominating financial assets and use the theory to explain why capital account opening, in addition to financial development and the size of the economy, is essential to RMB internationalization. Capital account opening is not non-controversial even among well-regarded economists. For example, well-known economists such as Dani Rodrik and Joseph Stiglitz are against it. It carries non-trivial risks, especially for emerging economies with immature banking and financial sectors. We ask two questions: Given that capital account opening carries risk, should China open its capital account just because it wants to internationalize the RMB? Do the benefits of capital account opening outweigh the costs regardless of whether or not China pursues RMB internationalization? To answer these questions, we discuss the benefits and costs of capital account liberalization, including the loss of exchange rate stability due to the open-economy trilemma. We explain the theoretical basis of the trilemma and the empirical evidence for it. We then point out that there is a positive feedback effect between capital account opening and financial market reform. Thus, the initiative to internationalize the RMB, which calls for capital account opening, can set forth a chain reaction that facilitates capital account opening and financial market liberalization in tandem in a gradual and interactive manner. This provides the rationale for using RMB internationalization as an external commitment device to force the reform of the domestic financial market.

In Chapter 6, I concentrate on the importance of financial sector reform, focusing on the banking sector, the bond market, and the stock market. The banking system, which is tightly controlled by the state, is an important institution in the development model of China. Under this system, deposit rates are kept artificially low so as to channel cheap credits to the state-owned enterprises for investment. In a country that was short of capital in its early stage of development, this might have been a justifiable policy. This is in fact a classic example of financial repression. However, it is also economically inefficient in the later stage of development. The largest banks are all state-owned, the interest rates are not market-determined, and state-owned enterprises (SOEs) still enjoy preferential access to credits compared with the private sector, which consists of many small and medium-sized enterprises (SMEs). Thus, it leads to misallocation of capital. There are no significant private financial institutions or banks to challenge their large state-owned counterparts. Because of the lack of external competition, the financial sector is quite inefficient. A deep, broad, and liquid financial market cannot be developed. This is unfavorable to RMB internationalization. At the same time, because subsidized credits are available, many state-owned enterprises lack the incentives to attain the best international standards. Thus, the financial sector cannot be reformed without reforming the state-owned enterprises. The vested interests in the financial sector are serious obstacles to reform as well. The bond market developed only recently. Most important developments in the

Chinese bond market have happened only since about 2015. China's bond market is characterized by its relatively small size relative to its GDP, low turnover ratio, and low foreign ownership. The Chinese government bond market, which is most important for the internationalization of the RMB, needs to be much further developed in order to pave the way for the RMB to serve as a significant reserve currency. The market capitalization of the stock market is small relative to the GDP of China. It is characterized by low fund-raising capacity, excessive government intervention, lack of transparency, capital controls, and other issues. Despite the obstacles, however, financial sector reform continues to be carried out. For example, the interest rate reform continues as an ongoing task; an onshore bond market is developing; and foreign financial institutions are gradually being allowed to operate onshore with majority ownership. Another positive signal for the financial sector is that market opening and integration with the rest of the world has not slowed down in recent years.

Chapter 7 explains the importance of the offshore RMB market. Historically, an international currency had to be largely convertible in the capital account, meaning that there had to be a high degree of capital mobility. Examples are the post-war United States, Britain, and Japan. But China wants to open its capital account only in a controlled manner as its institutions are still immature. Besides, China wants to retain the option of adjusting the extent of its capital controls when the needs arise. Thus, making use of offshore RMB centers located in international financial centers, such as Hong Kong, Singapore, and London, is a crucial step in launching RMB internationalization. Through this strategy, China sets up a firewall between the onshore and offshore markets, allowing full convertibility of RMB in the offshore market but partial convertibility in the onshore market. In this chapter, I study the operation of the offshore RMB centers, in particular that of Hong Kong, which is by far the largest offshore center. I describe in detail the difference between the onshore and offshore foreign exchange (FX) markets. I discuss the settlement and clearing of offshore RMB payments, the operation of RMB liquidity provision, and the RMB financial products being offered by banks and financial institutions such as the Hong Kong Exchange. Importantly, I describe in detail the Cross-Border Interbank Payment System (CIPS) of China, explain how it speeds up international payments of RMB, and compare it with the Clearing House Interbank Payments System (CHIPS) of the United States. I explain the economics behind the operation of the Hong Kong offshore market; in particular, I explain the relationship between the onshore and offshore interest rates and exchange rates using an economic model based on the "uncovered interest parity" condition. I compare the offshore USD market with the offshore RMB market so as to understand what improvements are necessary in the offshore RMB market.

A qualitative analysis is not enough for us to understand the quantitative importance of the various factors in determining the success of RMB internationalization. In Chapter 8, I carry out a quantitative study of the determinants of RMB internationalization, focusing on assessing the potential of the RMB as an international payment currency. I present an econometric study to demonstrate that financial development and capital account openness are distinctly more important than the GDP of China in determining the share of the RMB in international payments. Using the inter-country payments flows data provided by SWIFT and the "gravity model" as the theoretical framework, I carry out a regression analysis to identify the determinants of bilateral inter-country payments flows by currency. Then, I use the model to predict the future share of the RMB in global payments. I find that, in the best-case scenario, the RMB can possibly become the (distant) third payment currency (behind the USD and euro) by 2030. However, despite China's large expected economic size, it would be hard for the RMB to come even close to the status of the euro as a payment currency because it would be hard for China to attain the required levels of financial development and capital account openness, given the underdevelopment of China's institutions. I also carry out a very simple exercise to estimate the impacts of the Belt and Road Initiative on the payment share of the RMB and its share in denominating international debt securities. I find that the impacts are not very large.

In Chapter 9, the concluding chapter, I discuss the prospects of RMB internationalization. There are plenty of reasons to be pessimistic. First, the population is ageing, and the labor force had already begun to shrink in 2012. The shrinking labor force can have a nontrivial impact on economic growth. Without sufficiently large economic size, it is hard for China's currency to attain the market thickness necessary for internationalization. Second, China is too wary of the risks of a high degree of capital mobility to relinquish capital controls in the onshore market any time soon. Third, the development of a deep, broad, and liquid financial market in the onshore market will probably take a long time. Fourth, in order to be a "safe-haven currency," China must gain foreigners' trust in China's institutions, such as having an independent judiciary, an independent central bank, democracy, and freedom, which China still lacks. There are, however, reasons for cautious optimism as well. First, despite a possible slowdown in the growth rate, China's economy is probably going to become the largest economy before long, giving it size advantage. Second, China has more incentives than other countries, such as Japan, in internationalizing its currency. It has a strong desire to be more independent from the United States and the USD-based IMS; and the external commitment associated with RMB internationalization can be used as a tool to force domestic financial sector reform. Third, as the United States' GDP share of the world is set to fall continuously because of the fast growth of developing countries, the United States eventually will not be able to supply the assets for reserves and payments needed by the world. Some other currency(ies) is (are) needed to fill the gap, and the RMB is a strong candidate. It may not be too far-fetched to imagine that, eventually, the world will become a multipolar system, with the USD, euro, and RMB being the three main reserve currencies. The road for the RMB to get there, however, may be quite long.

The theoretical framework of this book can be summarized by Figure 0.1.

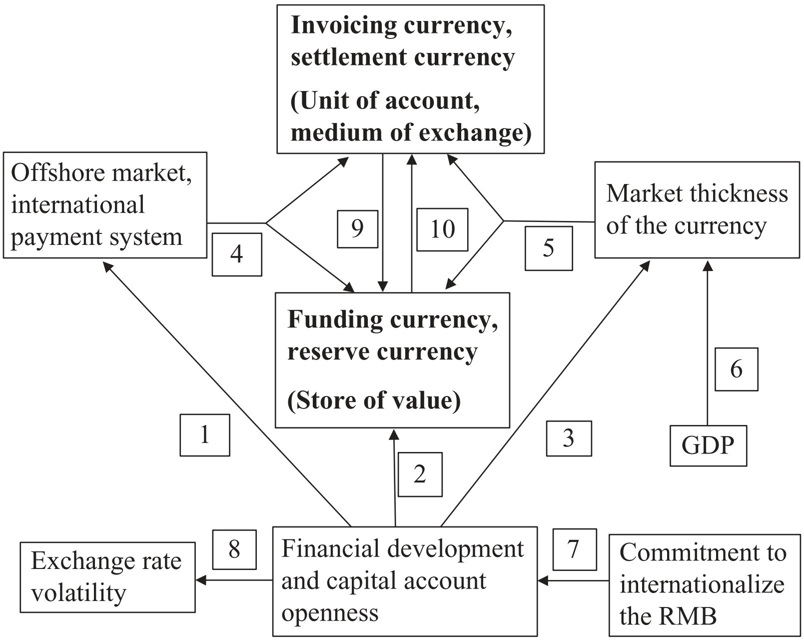

FIGURE 0.1 A summary of the theoretical framework of this book. Text in bold represents the goals of RMB internationalization. Numbers in the figure correspond to the notes below.
1: Scale and scope of offshore market activities increase with onshore financial development and capital account openness (Chapter 7).
2: (a) Freer capital mobility increases inward and outward investment flows (Chapter 5);(b) deeper, broader, and more liquid financial markets (e.g., bond market, stock market, and banking sector) increase inward foreign investment flows (Chapter 6).
3: Financial development and capital account openness increase the extent to which the currency is used internationally (Chapters 5 and 8).
4: (a) Creation of an offshore market where RMB is fully convertible while maintaining a partially convertible RMB market onshore, with a firewall in between, is a key strategy in launching the internationalization of RMB (Chapter 7);(b) Offshore currency centers and an international payment system facilitate efficient flows of funds between the onshore and offshore markets and enhance the impacts of financial development and capital account opening on RMB internationalization (Chapter 7);(c) Offshore currency centers and an international payment system facilitate efficient operation of the offshore financial markets and offshore use of the RMB (Chapter 7).

FIGURE 0.1 (*cont.*)
5: Thicker market for the currency lowers transaction costs of currency conversion and increases convenience of using the currency, increasing FX turnover and liquidity of the currency (Chapters 5 and 8).
6: GDP increases the global usage of the currency as the country's international economic activities expand (Chapters 5 and 8).
7: Commitment to internationalize the RMB creates pressure for capital account liberalization and financial sector liberalization (*daobi* [倒逼]). With RMB internationalization as a catalyst, the two liberalization initiatives can proceed gradually and interactively in tandem, defying conventional wisdom concerning the "sequence of liberalization" (Chapter 5).
8: According to the open-economy trilemma, opening the capital account will lead to higher exchange rate volatility if autonomy in carrying out monetary policy is to be retained (Chapter 5).
9 and 10: The functions of unit of account, medium of exchange, and store of value reinforce each other (Chapter 3).