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Yin-Wong Cheung

A Decade of RMB Internationalization

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Bank of Finland
BOFIT – Institute for Economies in Transition

PO Box 160
FIN-00101 Helsinki

Phone: +358 9 183 2268

Email: bofit@bof.fi
Website: www.bofit.fi/en

Contents

Yin-Wong Cheung

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Abstract

This article recounts China's renminbi (RMB) internationalization experiences since the 2009 RMB cross-border trade settlement initiative. In the first few years, the RMB made inroads into global financial markets and had a few remarkable accomplishments, including the Special Drawing Right currency status. Since the 2015 market turmoil, RMB internationalization has levelled off – possibly due to changes in both domestic and geopolitical conditions. The RMB is currently under-represented in the global market compared with China's economic importance. China's deliberate and schematic policies will elevate the RMB's global stature in a gradual manner but there will not be a leapfrogging in the near term.

Keywords: economic and non-economic factors, global currency status, offshore RMB market, policies promoting international uses.

JEL classifications: F02, F31, F33, G15, G18

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Correspondence address: Yin-Wong Cheung, Hung Hing Ying Chair Professor of International Economics, Department of Economics and Finance, City University of Hong Kong, Hong Kong. Email: yicheung@cityu.edu.hkTeksti

1. Introduction

The coronavirus pandemic continues to reshape the global economy in drastic and lasting ways. Among other things, lockdowns have caused serious breakdowns of intra-country and cross-border interactions and imposed pernicious effects on the real economy. The resulting disruptions highlight the risk of dependency on a single global supply chain and the potential benefits of diversified supply sources. They have also prompted countries to evaluate the merits of breaking up a complex global supply chain and setting up diverse regional supply chains with a view to creating a resilient and inclusive economy.

The crisis has also weighed heavily on global financial markets, reviving concerns about the US dollar's role in the international monetary system and its reserve currency status. At the start of the pandemic, the US dollar played its usual role as a safe-haven currency. With the economic headwind caused by the public health crisis and uncertain political outlook, the market began to fret about the global stature of the US dollar. Will the US dollar benefit from the pandemic turmoil and enhance its status as a safe-haven and the preeminent global currency as in the wake of the 2008 global financial crisis (GFC), or will the US buckle under the pandemic, dethroning the US dollar? Will China capitalize on its early exit of pandemic lockdowns and strengthen its currency's global stature?

Given the US bungling of the crisis and China's successes in containing and suppressing the outbreak, China is now expected to lead the global post-pandemic recovery. This creates a possibility that the Chinese currency, the renminbi (RMB), supplants the US dollar's primacy in the global financial system.

After the difficult experience of dollar shortage during the 2008 GFC, China promoted the international use of the RMB and approved a pilot scheme of RMB cross-border trade settlement in 2009 to reduce dollar dependence.[1] International investors prepared for a global RMB with such features as RMB-oriented investment vehicles and themes. Academics generated various assessments of the RMB's global role and prospects for toppling the US dollar. In late 2015, the IMF announced the RMB's Special Drawing Right inclusion and, around that time, the RMB internationalization process had levelled off and stalled in the next few years due to China's tightened capital controls and financial deleveraging policies.

In this study, I take stock of China's policy of internationalizing the RMB and its accomplishments. Why is such an assessment necessary? Conceivably, the RMB's path to global currency stardom is complicated. In addition to the commonly mentioned economic and political fundamentals,[2] the RMB's global status depends on social and institutional characteristics, geoeconomic and geopolitical environments, and reactions from the US and other incumbents.

My discussion begins with a recounting of China's experiences internationalizing the RMB. Next, given a comprehensive assessment of China's direct and indirect policies to promote the RMB usage overseas is beyond the scope of this paper, the analysis turns to the RMB's prospects and main policy issues. Hopefully, my selected areas of focus offer a reasonable overview of RMB internationalization.

The study is structured as follows. Section 2 describes China's main policies to promote the RMB's global usage. Section 3 looks at the current global status of the RMB. Section 4 deals with

[1] International Monetary Fund (2010) considers the RMB, euro, and yen to be the three national currencies capable of competing with the US dollar in the global market. Studies on RMB internationalization include Cheung et al. (2011), Eichengreen (2013), Eichengreen and Kawai (2015), Frankel (2012), and Prasad (2016).

[2] See e.g. Cheung (2015), Chinn and Frankel (2007), Chen and Peng (2010), Eichengreen (2014), Lane and Burke (2001), Li and Zhang (2017), and Prasad and Ye (2013).

offshore RMB trading. Section 5 evaluates the RMB's internationalization in retrospect. The last section summarizes and offers final thoughts.

2. Policies to promote RMB internationalization

In July 2009, China approved a pilot cross-border trade settlement scheme to promote and facilitate the use of the RMB overseas.[3] RMB settlement of foreign trade allowed Chinese companies to reduce their exchange risks and currency conversion costs, as well as their reliance on the US dollar.

China more recently has introduced measures to support the RMB cross-border settlement scheme and promote global use of the RMB. These include (i) the appointment of local RMB clearing banks in the offshore markets for clearing cross-border RMB transactions, (ii) the setup of bilateral RMB currency swap agreements to provide a liquidity backdrop during an RMB shortage, and (iii) the assignment of Renminbi Qualified Foreign Institutional Investor (RQFII) quotas for accessing China's onshore capital markets. The main stated functionality of the first two policy measures was the provision of RMB liquidity to support cross-border trade and investment. The third policy measure was intended to enhance the attractiveness of offshore RMB holdings. The three measures, discussed in detail below, constitute the main elements in developing an offshore RMB business.

Hong Kong has played a unique role in China's strategy of internationalizing the RMB. The special administrative region, sometimes labelled the "super-connector" between China and the rest of the world, is legally part of China, but nevertheless considered "offshore" for the purposes of RMB transactions.[4] On top of its advanced financial market infrastructure, Hong Kong is quite capable of and amenable to implementing the nitty-gritty regulatory requirements China wants in its offshore RMB initiatives. By experimenting with specific RMB internationalization policies in Hong Kong, China has been able to evaluate the effects of the policies before introducing them to the rest of the world while maintaining capital controls and tightly regulated domestic financial markets.

2.1 Local RMB clearing banks

To prepare for cross-border RMB transactions, China designated the Bank of China (Hong Kong) in December 2003 as an RMB clearing bank to settle RMB transactions in Hong Kong. It was the first such facility outside mainland China. A first-mover advantage and China's policy support catapulted Hong Kong into the position of leading global hub for offshore RMB business, providing its market with the world's largest offshore pool of RMB liquidity.

China has since designated offshore RMB clearing banks at other financial centers across continents and time zones. Out of the 26 financial centers with an offshore RMB clearing bank, ten are in Asia. This relatively heavy concentration is indicative of China's plans to establish a regional RMB presence in Asia before going global. Table 1 lists the offshore RMB clearing banks in chronological order.

London, the archetype global financial center with the largest foreign exchange market and extensive multinational corporation networks, was the first financial center in the European time zone that China assigned an offshore RMB clearing bank in June 2014 (although Frankfurt quickly followed). Indeed, London was quite aggressive in developing its offshore RMB business. It was the

[3] The scheme initially covered designated companies in five pilot cities (Shanghai and four cities in Guangdong Province). By August 2011, all regions in China were covered under the scheme.

[4] Under The Basic Law of the Hong Kong Special Administrative Region, Hong Kong is allowed its own currency, as well as its own legal and financial systems.

first G7 country with a local RMB clearing bank, the first to sign a bilateral local currency swap line with China (RMB 200 billion in June 2013), the first to issue sovereign debt denominated in RMB (October 2014), and the first foreign market in which China's central bank issued overseas debt (October 2015). With Toronto joining the group in November 2014, the core network of offshore centers with local RMB clearing facilities covers the global financial world and makes 24-hour round-the-clock RMB trading possible.

The assignment of a local clearing bank has both symbolic and practical elements. It is symbolic in the sense that, since 2004, foreign banks and corporations have had access to offshore RMB clearing through the RMB real-time gross settlement system in Hong Kong. China's Cross-Border Interbank Payment System (CIPS), which was launched in October 2015 further reduces the practical role of offshore RMB clearing banks. Authorized by the People's Bank of China, CIPS is a specialized clearing system that works with direct and indirect participants to provide clearing and payment services for financial institutions in the cross-border RMB and offshore RMB businesses. By July 2020, CIPS has 33 direct participants and 947 indirect participants from over 90 countries and regions on six continents.[5]

2.2 Bilateral local currency swap agreements

During the 2008 GFC, an unexpectedly sharp drop in global US dollar liquidity severely constrained international trade and depressed global economic activity. To alleviate its vulnerability to a dollar shortage, China established bilateral currency swap agreements involving the RMB and the national currencies of signing counterparty countries. Since December 2008, China has signed bilateral local currency swap agreements worth over RMB 3.7 trillion with more than 39 foreign central banks or monetary authorities (People's Bank of China, 2020). Table 2 lists the bilateral swap agreements signed between 2008 and 2019.

These swap agreements support bilateral trade and investment and promote the international use of the RMB. In principle, they allow these countries to bypass the US dollar and free them from the US dollar dominance in global trade. They also provide a liquidity backdrop in the event of RMB shortage. The local currency swap agreement is now a staple feature of China's strategic promotion of international RMB use.

Focusing on China's swap line policy, Garcia-Herrero and Xia (2015), Liao and McDowell (2014) and Lin et al. (2016) show that the choice of counterparty countries and swap line amounts are determined by trade intensity, economic size, strategic partnership, free trade agreements, as well as the levels of corruption and political stability of the counterparty country. Song and Xia (2020) show that the signing of a RMB bilateral local currency swap arrangement promotes RMB use in settling the corresponding cross-border trade. They also observe that RMB swap agreements are quite different from swap agreements between the Federal Reserve and the world's other leading central banks used to ensure global dollar liquidity. The importance of these Federal Reserve swap agreements became timely again in March 2020, when they were activated to counter liquidity shortages triggered by the coronavirus pandemic.

[5] See http://www.cips.com.cn/cipsen/7050/index.html for additional information. CIPS is operated by the China International Payment Service Corp.

2.3 The RQFII program

In the initial phase of building up offshore RMB liquidity, China contemplated several ways to shore up demand. In December 2011, China introduced the Renminbi Qualified Foreign Institutional Investor (RQFII) program that gives approved foreign institutions access to offshore RMB to invest in China's onshore financial markets.[6] The RQFII program is a variant of the original QFII program introduced in 2002. It allows authorized foreign investors to invest onshore using a foreign currency (usually US dollars).

The first batch of institutions in the program included only authorized subsidiaries of China's brokerage houses and fund managers in Hong Kong. These groups mainly invested in the Chinese onshore bond market and were geared toward fixed income products instead of equities. The RQFII program has since been expanded to different financial centers overseas and covers other asset classes beyond fixed income products. Table 3 lists the RQFII arrangements.

Since the RQFII program launched, China has introduced several other inbound investment schemes, including the Shanghai-Hong Kong Stock Connect in 2014, the Shenzhen-Hong Kong Stock Connect in 2016, and Bond Connect programs in 2017.[7] The "connect" programs were designed for specific onshore financial markets with investors directly investing in these markets via Hong Kong. The RQFII program offers a broader range of investable securities. In any case, all these inbound investment schemes compete with the RQFII program for foreign capital.

Over time, the RQFII program has undergone several modifications in participant qualification rules and eligible investment classes. China ended the quota limit for the RQFII program on June 6, 2020 (State Administration of Foreign Exchange, 2019a). Together with the removal of investment caps, China has sought to simplify the paperwork on the remittance of the qualified investor's profits from domestic securities investment and other requirements. These changes are aimed at improving the setup for authorized institutional investors seeking to deploy their offshore RMB in China's onshore capital markets.

There has been no corresponding lifting of quotas for the Qualified Domestic Institutional Investor program, however. The QDII program governs Chinese residents investing in overseas markets. As a result, China's portfolio flow rules remain asymmetric.

2.4 Other policy measures

China uses a multipronged strategy in promoting RMB acceptance in the global market. In addition to global trade and investment transactions, China has sought to burnish geoeconomic and geopolitical perceptions of its currency.

2.4.1 The SDR

Heavy lobbying efforts on China's part in the early 2010s help get the RMB included in the IMF's basket of Special Drawing Right (SDR) currencies. China's campaign for recognition as a global

[6] Offshore RMB market products include Dim Sum bonds, RMB-denominated equities, as well as exchange-traded and over-the-counter RMB derivatives.

[7] As of August 2020, two global depositary receipts (GDRs) were listed on the London Stock Exchange via the Shanghai-London Stock Connect program launched in June 2019. The two listings are also available to international investors through Hong Kong via the Shanghai-Hong Kong Stock Connect.

economic power finally paid off in November 2015, with the IMF announcing that the RMB would be joining the select group of SDR currencies. The move was lauded as an acknowledgement of China's importance in the global economy and ongoing reform efforts. Not only was the RMB the first developing-country currency included in the SDR basket, it was also the first new currency added to the basket since the euro's launch in 1999.

On October 1, 2016, the RMB officially joined the SDR basket with a 10.9% weight. The current weights of the other four SDR currencies are 41.7% for the US dollar, 30.9% for the euro, 9% for the Japanese yen and 8.1% for the British pound. Official global reserve currency status has provided a symbolic boost to the RMB's global credibility.

2.4.2 Commodity pricing

The US dollar's role in commodity pricing attests to its international primacy. Key globally traded commodities, including oil and gold, are quoted and traded in US dollars – a market practice that reinforces the currency's global dominance.

As part of its broad RMB internationalization policy, China has introduced RMB-denominated commodity contracts for the global community. The strategy leverages the phenomenal growth of China's presence in global commodities over recent decades (World Bank, 2018). As the world's top participant of many traded commodities, China has become increasingly dissatisfied with the common practice of dollar pricing of international transactions. The promotion of RMB-denominated commodity contracts reflects China's yearning to reduce its reliance on US-dollar based trading of commodities and offer RMB-denominated hedging tools for domestic investors and consumers. In addition to fostering global uses of the RMB, the strategy undermines US dollar hegemony in the commodity space. Solanko (2020), for example, points out that the euro is now the dominant currency in Russian exports to China.[8] Both countries' interests align in avoiding the US dollar in bilateral trade arrangements where state-owned energy companies figure heavily.

China currently limits foreign investors to certain RMB-denominated commodity contracts, most notably those involving gold, iron ore, or oil. China has focused on the gold market because it is one of the world's biggest gold producing, consuming, and importing countries. In September 2014, China opened to global investors its RMB-denominated gold bullion trading on the Shanghai International Gold Exchange, which is located in the Shanghai free trade zone.[9] The Shanghai International Gold Exchange is a fully-owned subsidiary of the Shanghai Gold Exchange. It is known as the "International Board" of the Exchange. In April 2016, the Shanghai Gold Exchange launched an RMB-denominated Shanghai Gold Benchmark Price, or Shanghai Gold Fix. Futures contracts based on the RMB-denominated gold fix are now offered, for example, on the Chicago Mercantile Exchange and the Dubai Gold & Commodities Exchange.

International investors gained the possibility of trading RMB-denominated iron ore futures and crude oil futures contracts in 2018. RMB-denominated iron ore futures contracts were launched in October 2013 on the Dalian Commodity Exchange. Overseas institutions were allowed to participate in trading in February 2018, and overseas retail investors were allowed in February 2019.

China finally launched its RMB-denominated oil futures contracts on the Shanghai International Energy Exchange in March 2018, six years after the original planned launch date. International traders were invited to join the trading platform. Besides boosting the status of the RMB, the Shanghai oil contract aspires to be a regional (and eventually global) benchmark that rivals

[8] See also Bank of Russia (2020). It reflects the concerted efforts of China and Russia to move the world away from the US dollar.

[9] Since October 2011, the century-old bullion house Chinese Gold & Silver Exchange Society in Hong Kong has offered exchange trading of gold in RMB to both local and global investors.

established global benchmarks such as the Intercontinental Exchange's Brent crude oil contract and the New York Mercantile Exchange's West Texas Intermediate Crude Oil futures contract.

Since the launch, RMB-denominated oil contracts have seen heavy trading volumes in Shanghai. There has even been talk of a petroyuan-petrodollar rivalry (Kamel and Wang, 2019; Mathews and Selden, 2018; Salameh, 2018). Bloomberg Intelligence reports that Shanghai oil contracts accounted for 10.5% of the global market trading volume at the start of June 2020.[10] During most quarters since the launch, the global market share of the volume has been above 10%. As of June 2020, China had opened to overseas investors three additional RMB-denominated futures contracts: purified terephthalic acid (PTA) futures, natural rubber futures, and low-sulfur fuel futures.

Evidently, China is following its gradualism approach in opening up its domestic RMB-denominated commodity trading. In addition to being part of the broader policy of promoting global uses of the RMB, RMB-denominated commodity contracts boost China's pricing power over key commodities, offer RMB-denominated hedging tools, and circumvent the US dollar influences in the global commodity arena.

2.4.3 International initiatives

In addition to securing the SDR currency title and offering RMB-denominated commodity contracts, China has been crafting international initiatives with the potential to foster RMB use overseas. Two prime examples are the Belt and Road Initiative on infrastructure and trade and the Asian Infrastructure Investment Bank on financing infrastructure projects.[11] These initiatives dovetail nicely with the RMB internationalization project. If trade and infrastructure projects thrive among member countries of the Belt and Road Initiative, there is an increased possibility for using RMB in financing of these projects to e.g. safeguard against financial risk.

3. The RMB's global status

China's measured implementation of policies that strengthening the RMB's global role has wide implications. Over the past decade, the RMB has made considerable headway into global markets as RMB business activity has spread from Asia to other parts of the world. In this brief stocktaking of the current global status of the RMB, I assess international RMB use by considering global foreign exchange (FX) trading, holdings of international reserves, use in world payments, and the Renminbi Globalisation Index compiled by the Standard Chartered Bank.

3.1 Global FX trading

The world's largest financial market, the global FX market, provides decentralized trading of national currencies. Trading activity is typically used to gauge the relative importance of national currencies. The Bank for International Settlements (BIS) triennial central bank surveys give a detailed account of FX turnover in the global FX market. The growing role of the RMB is well illustrated by its global FX trading share.

The BIS triennial surveys show that the average RMB daily FX turnover in the global market surged from 29.2 billion in 2010, 119.6 billion in 2013, and 202.1 billion in 2016, to 285.0 in 2019.

[10] See Appendix A1.

[11] See http://english.www.gov.cn/beltAndRoad/ and https://www.aiib.org/en/index.html.

The surveys (BIS 2010, 2013, 2016, 2019) further show that the RMB's global trading share increased between 2010 and 2019 from 0.9% to 4.3%, and rose from 17th to eighth most traded currency.

Despite the rapid gains of the RMB in global FX trading, its turnover is still low given China's economic size and international trade. Table 4 lists for each SDR currency the ratios of average daily turnover to gross domestic product (GDP) and to international trade volume. The Hong Kong data are included for comparison purposes. Note that the currency of Hong Kong, a special administrative region with an economy size 2.6% that of China's, ranked ninth most-traded currency, accounting for 3.5% of global turnover in the 2019 BIS triennial survey.

The top four most-traded currencies in 2019 were the US dollar, the euro, the British pound and the Japanese yen. The US dollar accounted for above 80% of all transactions.[12] The fifth SDR currency, the RMB, ranked eighth most traded. The RMB average daily FX turnover to GDP and to international trade ratios are the smallest among the SDR currencies. According to these two ratios, the US dollar, as the predominant global currency, is the most heavily traded currency. Compared to the other SDR currencies, RMB turnover is quite low with respect to economic measures such as GDP and trade volume.

Table 5 presents the shares of global FX trading contributed by trading hubs that issue the SDR currencies and the Hong Kong dollar. Global FX trading is concentrated in a few international financial centers. For instance, the top two trading locations, the UK and the US, account for over half of global turnover. The euro area and Japan collectively contribute roughly 10% to 15% of global trading. [13] Between 2010 and 2019, China's share of global FX trading increased from 0.4% to 1.6% (a share noticeably lower than that of Hong Kong). Compared to other financial centers, including Hong Kong, China has room to expand its FX trading business.

3.2 Share of global reserves

Even before the announced RMB's inclusion in the SDR currency basket in November 2015 and the conferral of IMF official global reserve status, predictions abounded about the trend of the RMB's share of global reserves. The Economist Intelligence Unit (2014), for example, indicated that a majority of institutional investors – especially those in China – expected the RMB to overtake the US dollar as the main global reserve currency. Chen and Peng (2010), Hu (2008), and Lee (2014), in contrast, predicted that the RMB would only account for 3–20% of global international reserves within 10 to 15 years. The wide range of predictions (also found in a recent study Lu and Wang, 2019) reflects the sensitivity of these predictions to the assumptions and methods used in these studies. The IMF's endorsement of the RMB as its fifth official global reserve currency is perceived as a major push for the currency's role in global reserves because it enhances the currency's credibility and induces a degree of passive allocation of the currency in official reserves.

So, what is the RMB share of global reserves today? The IMF Currency Composition of Official Foreign Exchange Reserves (COFER) database is the common source of currency composition of global reserves. The first time COFER identified the amount of global reserves held in the RMB is the last quarter of 2016. Since then, five SDR currencies and three non-SDR currencies are distinguished in the COFER data. Table 6 presents the global reserve holdings in the five SDR currencies for selected periods. 2016 Q4 is the first quarter in which data on separate identification of reserves in RMB are available and 2020 Q1 is the last observation available at the time of writing.

[12] Since two currencies are involved in any FX transaction, the sum of the percentage shares of individual currencies totals 200% instead of 100%.

[13] The euro area data comprise data from member countries of the euro area.

The allocated data are compiled from those reporting countries/jurisdictions that disclose the currency composition of their reserve holdings. The share of known currency allocation data gradually increased to about 94% in 2018 Q4 and has since stabilized around that level. The US dollar and euro form a duopoly – 80% to 85% of allocated global reserves are held in these two currencies. The five SDR currencies collectively account for about 94%.

One caveat is that these data require converting reserve holdings into US dollars. That is, fluctuations of the US dollar's exchange rate affect the relative shares of these non-dollar reserve currencies. With this valuation caveat in mind, several observations are possible.

Between 2016 Q4 and 2020 Q1, the RMB share of global reserves almost doubled from 1.07% to 2.02% and improved from seventh to fifth largest reserve currency. At the end of 2019, the RMB was held by about 70 central banks and monetary authorities.[14] Note that RMB allocation growth has slowed since 2018 Q4 – a phenomenon likely due to the US-China trade dispute.

The percentage increase of reserves in the RMB is large. Indeed, its share surpassed the Australian and Canadian dollars to become the fifth largest reserve currency in 2018 Q4. Nevertheless, the RMB share was still small relative to the other four SDR currencies: 61.99% for the US dollar, 20.05% for the euro, 5.70% for the Japanese yen, and 4.43% the British pound.

The scale of RMB use as a reserve asset is not large. For instance, the dollar value of reserves held in RMB increased by US$131 billion between 2016 Q1 and 2020 Q1. During the same period, reserves held in dollars rose by US$1.293 trillion, almost ten times more. It is worth noting that, some countries – including China – are believed to have reduced their US dollar reserve holdings during this period. For example, Russia shifted a portion of its reserves from the dollar to the euro and the RMB in 2018 (BOFIT, 2020).[15]

Does the introduction of a fifth global reserve currency – the RMB – undercut the US dollar's premier reserve currency status? Since the RMB became a reserve currency, the US dollar share of global reserves has dropped from 65.36% (2016 Q4) to 61.99% (2020 Q1). Does it represent a variation within the 60% to 65% range observed in the last two decades, or is it part of the secular downward trend of the US dollar share that started from the height of above 80% in the early 1970s?[16] Without offering a definitive answer, I would note that the RMB, euro, Japanese yen, and British pound all registered small increases in their shares during the same period.

The currency composition data can be influenced by China's gradual disclosure of its currency composition to COFER in the two or three years following 2015 Q2. China's State Administration of Foreign Exchange (2019b, 2020) reports that in 2014 and 2015, 58% of China's reserves were held in US dollars, i.e. less than the global average of 65% in 2014 and 66% in 2015. Note that China in these years held over US$ 3.5 trillion reserves and that the allocated reserves reported by COFER are US$ 6.8 trillion in 2014 and US$ 7.4 trillion in 2015. Thus, the gradual inclusion of China's currency composition can affect the reported US dollar share of global reserves.

On the other hand, one should not underestimate the RMB's potential as a reserve currency. In addition to China's continuing financial liberalization process, Chinese stocks and bonds enjoy an increasing presence in major global equity and bond indexes. These market developments improve the appeal of Chinese assets and support the RMB's quest at becoming a viable reserve currency.

[14] People's Bank of China (2020). COFER includes data reported from 149 countries and economies.

[15] The percentages of the Bank of Russia assets accounted for the euro and the RMB surpassed, respectively, the 30% and 10% levels after 2018 (Bank of Russia, 2019; 2020).

[16] See Appendix A.2 for the plot of the US dollar share of allocated global reserves. The US dollar share dropped below the 50% mark in 1990 and 1991.

3.3 Use in world payment transactions

Figure 1 presents data on the RMB use in world payments published by the Society for Worldwide Interbank Financial Telecommunication (SWIFT). The RMB share of world payments climbed from 0.31% in October 2011 to a high of 2.79% in August 2015, then settled back to 1.76% in June 2020. During that time, the RMB rank in world payments improved from the range of 15th to 20th place to the fifth to sixth place range (SWIFT, 2012, 2015, 2020). It is indisputable, therefore, that the RMB has experienced a sharp increase in world payment usage. The RMB's performance as a world payment currency reflects China's emphasis on trade facilitation and its substantial presence in international trade.

Despite the rapid ascent in world payments ranking, the RMB's absolute share of world payments is still relatively small compared to other SDR currencies. The collective share of the US dollar and the euro accounts for 71% to 75% of the world payments, while the Japanese yen and British pound together account for about 10%. Thus, the other four SDR currencies account for 81% to 85% of world payment transactions.[17] The latest RMB share figure of 1.76% is smaller than the latest RMB share 2.02% in global reserves.

3.4 The Renminbi Globalization Index

Since November 2012, Standard Chartered Bank has compiled the Renminbi Globalisation Index to track the level of RMB internationalization in terms of overseas RMB business activity.[18] The index offers a quantitative measure of the degree of RMB internationalization by enumerating overall growth in international RMB business.

Figure 2 plots the Renminbi Globalisation Index. It starts in December 2010 with a base value of 100, reaches the height of 2,563 in September 2015, then falls back to 2,224 in March 2020. The index grew 25 times in its first five years of existence, reflecting both the growth in the number of offshore financial centers included in the Index and the proliferation of RMB businesses in these centers.[19] Clearly, there is strong momentum behind the RMB internationalization process between 2010 and 2015.

The Renminbi Globalisation Index shows that, after September 2015, the global level of RMB business dropped for about two years. It then stabilized and moved slightly upward in mid-2018. Note that the RMB share of world payments in Figure 1 shows an inflection point around August 2015 at which it begin a roughly two-year decline, echoing the non-monotonic RMB internationalization process displayed in Figure 2. The change in the internationalization dynamics is also hinted at in Table 4, which shows that the growth of RMB turnover in the 2019 BIS triennial survey was lower than in the 2016 survey.

The setback highlights the limit of unilateral efforts to promote the international acceptance of the RMB. The various capital control measures introduced in response to the market turmoil that followed the August 2015 modification of the RMB central parity formation mechanism (People's

[17] The Hong Kong dollar in June 2020 ranked the seventh and accounted for 1.47% of world payments.

[18] The RGI was initially computed on a monthly basis using four offshore RMB market components: (1) CNH deposits, (2) trade settlement and other international payments, (3) Dim Sum bonds and certificates of deposit issued, and (4) foreign exchange turnover that capture the store of wealth, vehicles for international commerce and capital-raising, and unit of exchange functions. The weights of these components are inversely proportional to their 24-month normalized standard deviations. See Standard Chartered Bank (2012, 2020) for additional information.

[19] The index initially only covered Hong Kong. Singapore and London were added in August 2011, Taiwan in July 2013, New York in January 2014, and Paris and Seoul in August 2014.

Bank of China, 2015) caught global investors off guard. These capital control measures aimed at reining in capital outflow triggered by RMB depreciation expectations, financial deleveraging policy, and restricting investment overseas. The measures reinforced the asymmetric policy framework of welcoming inflows of foreign capital while limiting outflows. Foreign investors were forced to re-evaluate China's market reform policies while putting on hold commitments to RMB businesses.

Of course, the trade dispute between the world's two largest economies, China and the US, during Donald Trump's presidency has further impeded the RMB internationalization process.[20] Tariffs and the re-revamping of global supply chains triggered by trade disputes affect China's interactions with the rest of the global community. Disruption of global production chains and the associated economic uncertainty affect not only China's trade and economic relationship with the US, but also its allies. The economic (and political) discord underlying the dispute further hinders RMB use globally.

4. Offshore RMB trading

As noted earlier, China has adopted a broad strategy of developing offshore RMB centers to internationalize the RMB. The strategy allows China to retain its strict capital controls and tightly managed financial markets while assessing market responses to various RMB-denominated products in managing funding and investment needs, RMB exchange rate flexibility and convertibility, and their implications for authorities' ability to manage the Chinese economy. At the same time, both Chinese and foreign market participants can gain practical experiences of conducting international business in RMB in a legal environment recognized by international participants.

Do offshore markets contribute to the global status of a currency? The premier global currency, the US dollar, illustrates the *symbiosis* between a global currency's stature and the offshore market network. The US dollar's prominence benefits from full-fledged offshore US dollar markets around the globe. At the minimum, offshore markets allow a currency to perform its potential as an international currency outside the country where it is issued.

In principle, the scale and scope of offshore markets and a currency's international role are determined by overseas demand and market forces. In the RMB case, however, China assumes an active policy stance in orchestrating and promoting its offshore markets. Do these policies affect the evolution and the growth of the offshore RMB business? Focusing on offshore RMB trading, Cheung and Yiu (2017) find that the distribution of offshore RMB trading in the 2013 BIS survey was affected by the swap line arrangement.[21] Cheung et al. (2019) examine the evolution of a financial center's share of offshore RMB trading and find that the offshore RMB trading pattern was transiting towards the geographical distribution of global FX trading between 2016 and 2019. Policies, including assignments of local RMB clearing banks, currency swap agreements, and the RQFII program had little effect.

Table 7 gives the correlation between a financial center's share of the SDR currency's turnover and its share of total FX trading in a given year in the recent BIS surveys. Compared with the RMB, the other four SDR currencies are recognized global currencies, albeit with different prominence levels. They are also the top four most traded currencies. For these four SDR currencies, their correlations are quite close to one – a financial center share of global FX trading is quite closely

[20] Rising populism and deglobalization forces work against the RMB's international acceptance.

[21] It was also affected by the size of the financial markets in the host jurisdiction and the bilateral foreign direct investment flows with China.

associated with its trading shares of these four SDR currencies. That is, trading patterns and opportunities of these four global currencies are similar around the world.

The correlation estimates pertaining to the RMB are well below one. The geographic distribution of RMB trading is dissimilar to that of global FX trading. Moreover, the distribution of RMB trading across financial centers is different from those of the other four SDR currencies. The result is in accordance with the view that the RMB is still undergoing its internationalization process, and that the other four SDR currencies are established global currencies. We anticipate that as the RMB migrates toward the status of a key global currency, it will transit to a geographic trading pattern similar to that of global FX trading and offer investors opportunities similar to those of the other four SDR currencies.

Table 8 shows that offshore RMB trading is quite highly concentrated in four financial centers: Hong Kong, the UK, Singapore, and the US. With about 40% of offshore RMB trading according to recent BIS surveys, Hong Kong is clearly the premier offshore RMB center. The UK and Singapore alternate between the largest or the second-largest RMB trading center outside Greater China, while the US follows closely behind. These four centers collectively account for over 90% of the offshore RMB trading turnover. Compared with Table 5, I infer that offshore RMB trading is disproportionally concentrated in Hong Kong and Singapore – an observation that is in accordance with China's strategy of promoting the regional uses of the RMB before global uses (Cheung, 2015; Ehlers and Packer, 2013; Ehlers et al., 2016). China's RMB internationalization policy may have favored Hong Kong and other Asian financial centers, but for the RMB to evolve to be a full-fledged global currency, its trading must gradually spread to other parts of the world according to FX market forces that determine where the RMB is traded.

To shed light on the importance of the offshore RMB trading relative to onshore trading, Table 9 presents, for each SDR currency, the growth rates for turnover in the onshore and offshore segments across selected BIS triennial surveys. For the 2010–2013 and 2013–2016 periods, the growth of RMB trading in both onshore and offshore markets was quite pronounced compared with those of the other four SDR currencies. The increase in offshore turnover was also higher than onshore turnover. Between April 2016 and April 2019, however, onshore trading turnover grew by 83%, which is more than double of the 30% increase in offshore RMB turnover. The offshore RMB turnover growth rate is slightly lower than those of the US dollar and euro, i.e. after two consecutive increases, the relative offshore share of RMB activity declined in the 2019 BIS survey. RMB turnover growth in the 2019 BIS triennial survey is also lower than that of 2016. That lower growth coincides with lower growth in offshore RMB trading.

The relative subdued growth of offshore RMB turnover mirrors the slowdown of the internationalization momentum revealed in Figures 1 and 2 above. The post-2015 capital controls and geopolitical shifts reduce the appetite for RMB activity overseas. While tightening capital outflows, China has implemented additional policies for global investors to access its onshore markets. In addition to relaxing restrictions on participating in domestic bond, stock, and commodity (futures) markets, and removing the quota limit of the RQFII program, China has introduced specific policies to promote onshore RMB trading. Specifically, to improve and encourage onshore FX trading, China has gradually granted foreign central banks, sovereign wealth funds, and international financial institutions full participation in its onshore FX market and expanded the set of currencies that can be directly traded against the RMB. As of August 2020, 66 foreign central banks participated in the

onshore FX trading platform CFETS, which offers direct trading between the RMB and 24 other currencies.[22,23]

To further foster direct trade with non-US dollar, China in the second half of 2020 waived for three years interbank transaction fees between the RMB and twelve other currencies (the Hungarian forint, Korean won, Malaysian ringgit, New Zealand dollar, Polish zloty, Russian ruble, Saudi riyal, Singapore dollar, South African rand, Thai baht, Turkish lira, United Arab Emirates dirham). With direct exchanges with other currencies, China can further bypass the US in settling cross-border transactions and promote international use of the RMB.

5. RMB internationalization in retrospect

China's rapid economic growth in the last few decades has made it an important global economy participant. It is the second-largest economy globally, the largest trading country with substantial manufacturing power, and a significant trading partner for many economies. As trade and finance are highly intertwined in the modern economy, it is entirely logical that China will advance its influence in global financial markets. In the aftermath of the 2008 GFC, the then governor of the People's Bank of China, Zhou Xiaochuan, raised the concern of relying on one super-sovereign reserve currency. He implicitly challenged the US dollar hegemony and implied an international role for the RMB (Zhou, 2009). On the heels of global liquidity squeeze triggered by the coronavirus pandemic, the central bank's current governor, Yi Gang, called for a new SDR allocation to cushion the international monetary system (Yi, 2020).[24] The promotion of the SDR, which echoes Zhou (2009), could undermine the global stature of the US dollar and increase the global level of RMB reserves. These proposals, together with China's actual measures to promote the global acceptance of the RMB, are manifestations of China's yearning for a global RMB and shift away from the US dollar.

5.1 A decade of ups and downs

When China explicitly embarked in 2009 on its quest to raise the RMB to the status of global reserve currency, it was greeted with both praise and skepticism.[25] The previous two sections shows the RMB's strong start in building up its stature of a global currency, but the progress hit speed bumps after 2015 when China abruptly implemented a series of administrative capital control measures.

Like the 2008 GFC, the coronavirus pandemic initially triggered a surge in demand for safe US dollar-denominated assets, buttressing the safe-haven role of the US dollar. Indeed, Gopinath et al. (2020) affirm that the US dollar's dominance is pervasive. Further, the prevalence of the US dollar

[22] CFETS does not provide the names of participating central banks. Since September 2015, the RMB has become technically convertible for authorized foreign central banks that are allowed to participate in the onshore interbank RMB market. The onshore interbank RMB market was opened to authorized foreign commercial banks in May 2016.

[23] The currencies with direct RMB trading are listed in the Appendix A.3. In addition to these currencies, CFETS also supports regional trading of KZT, MNT, and KHR against the RMB.

[24] The fourth, and most recent, SDR allocation of 161.2 billion took place on August 28, 2009. It was preceded by an allocation of SDR 9.3 billion in 1970–1972, an allocation of SDR 12.1 billion (1979–1981), and an allocation of SDR 21.5 billion (August 10, 2009). The third allocation was a special one-time allocation targeting countries that joined the IMF after 1981.

[25] Chen et al. (2009), Lee (2014), and Subramanian (2011a,b) suggest the RMB was well poised to become a main global currency, while Eichengreen (2013) and Yu and Gao (2011) adopt a more conservative view. See also Eichengreen and Kawai (2015).

in invoicing global trade has not weakened despite the US's declining share of overall trade (Boz et al., 2020).[26]

After the initial response, the global market shifted its attention to the US responses to the pandemic and rekindled the concern about the risk the US dollar posted to the international monetary system and the possible demise of the US dollar's supremacy. While the pandemic arose under different geoeconomic and geopolitical conditions than in 2008, it reminded the world of US hegemony and repeated abuses by the US of its exorbitant privilege. The rippling economic shocks from the pandemic first sent the US dollar value up and then down. The dip in the US dollar coupled with the economic and political uncertainties inflicting the US have revived the talk and speculation of replacing the US dollar with the RMB.

China undeniably made admirable accomplishments that include expanding cross-border transactions in RMB and offshore RMB trading, acquiring the prestigious SDR currency title, offering RMB-denominated commodity contracts, and climbing the ranks in global FX trading and global reserve currencies. Yet, for all of China's economic heft, the RMB, compared to the US dollar, is a small player on the global stage. For instance, the RMB shares of global FX turnover, global central bank reserves, and world payments are 4.32%, 2.02%, 1.76%, respectively. They are small fractions of the corresponding US dollar shares (more than 80%, 60%, and 40%, respectively).

Given China's economic power and policies designed to promote the RMB's international use, when will the RMB be a significant player in the global monetary system? While some might find the minute scale and scope of the RMB use surprising, especially given China's predominance in international trade, we should remember that a currency's global status depends on both economic and geopolitical factors. Economic strength, while important, is not the sole determinant of a currency's global stature. The global significance of a currency encapsulates a complex nexus of the issuing country's domestic economic and political fundamentals and its leadership abroad as perceived by global investors. It also rests on the credibility, confidence, and trust earned by the currency. Thus, despite China's growing economic prowess and deliberate efforts, the RMB's progress can be constrained by non-economic factors. Obviously, maintaining controls on both capital inflows to and outflows from China will act as a brake on the RMB internationalization.

In hindsight, China's botched handling of the mid-2015 market turmoil caused global investors to re-assess the RMB globalization process. The fiasco stirred up concerns on China's inextricable link of economic policy and political ideology, and the uncertainty surrounding China's determination on liberalizing financial markets. These concerns do not help to popularize the RMB. The growth of RMB global usage is further hampered by the China-US trade dispute, which has spilled over to technology and finance areas. As noted in previous sections, these events all contributed to the slowdown in RMB progress in the second half of the 2010s.

5.2 Multipronged strategy: positive and negative factors

Despite these tensions, China has continued its multipronged strategy to promote the RMB's global usage and acceptance directly and indirectly while keeping a tight grip on the currency. One approach involves strengthening geopolitical and geoeconomic influence. In this regard, China has increased its level of engagement and secured key positions in major international organizations such as the United Nations, IMF, and the World Bank, and has joined a variety of other international

[26] While the US accounts for about 12% of global trade, the US dollar is used in about 50% of international trade contracts (Boz et al., 2020). The euro is also used extensively in international trade.

organizations.[27] China has also set up its own international economic and financial network, including the Asian Infrastructure Investment Bank, Belt and Road Initiative, New Development Bank, and Shanghai Cooperation Organisation. By participating in these existing and new international organizations, China strengthens the political and economic links with the rest of the world and creates more opportunities for soliciting support for global use of the RMB.

Another approach has been to step up efforts to open up domestic financial markets, including stock, bond, and commodity markets to authorized global investors. For the onshore stock and bond markets, this already means global investors can participate via the Shanghai-Hong Kong Stock Connect, the Shenzhen-Hong Kong Stock Connect, and Bond Connect programs. Chinese stocks and bonds are also increasingly exposed to foreign investors as they are included in internationally traded in global indexes. For example, onshore stocks and bonds are included in the MSCI global and regional indexes, the Bloomberg Barclays Global Aggregate Bond Index, and JP Morgan Government Bond Index – Emerging Markets. It is expected that Chinese stocks and bonds will be included in more international indexes in the near future.[28] The inclusion in these benchmark indexes signifies the index provider's recognition of China's financial market reform efforts and will enhance the RMB's global acceptance and use.

In 2020, China initiated the testing phase of its digital RMB project.[29] The introduction of digital RMB highlights China's leading position in the fintech field. The digital RMB will entail a digital transaction platform offering low fees. Digital RMB transactions will be extended to cross-border transactions if the digit transaction platform is connected to e.g. the CIPS. Similar to the CIPS, the digital currency project could facilitate cross-border RMB and offshore RMB businesses. In this sense, a digital RMB also advances the use of the Chinese currency overseas. Of course, a digital RMB backed by China's central bank could only be a form, but not a fundamental, change if, for example, capital controls and exchange rate management policies remain in place.

While China has actively prepared for the global usage of the RMB, some of its other policies – including both economic and non-economic policies – may have unintended consequences. The 2015 fiasco well illustrates the deterring effect of capital control policies. Moreover, RMB internationalization is not purely China's decision. Diplomacy is essential in promoting international use of the RMB. Thus, while China has constantly emphasized a peaceful development policy, territorial disputes with neighboring countries, especially in the South China Sea, have served to revive historical animosities.[30] These territorial disputes, which do nothing to assuage China's skeptics and complicate diplomacy, also create a drag on efforts to promote the RMB's global use. This is highly relevant as the most natural users of the RMB would presumably be China's neighbors. The RMB global image also is likely to be damaged by its "wolf warrior" diplomacy, in which China adopts a belligerent attitude towards critics from foreign governments and companies and blatantly deploys social media to ridicule foreigners with different opinions.[31]

The trade dispute between the US and China that started in mid-2018 could also impede RMB penetration into the global market. The implications of the dispute for the RMB usage are beyond the trade relationship between the two countries. For instance, the trade dispute has triggered the

[27] China has taken part in different capacities in hundreds of international organizations (*CIA World Factbook* - https://www.cia.gov/library/publications/the-world-factbook/fields/317.html#CH).

[28] FTSE Russell announced that Chinese government debt would be incorporated in its World Government Bond Index (subject to confirmation in March 2021).

[29] Kiff, et al. (2020) offers a recent survey of research on retail Central Bank Digital Currency (CBDC). Fernández-Villaverde et al. (2020) analyzes the implications of CBDC for private banking.

[30] See e.g. Huang and Billo (2015). Stokes (2015) indicates that territorial disputes undermined China's popularity in the region.

[31] There are also complaints against China's coercive diplomacy (Hanson et al., 2020). The growing unfavorability to this approach is reported in e.g. Silver, Devlin and Huang (2020).

discussion of reshaping supply chains away from China, affecting China's economic interactions with other countries. The pandemic experience further makes re-structuring the global supply chain a serious topic. The trade dispute has gradually spilled over into technology and finance spaces. Such a development makes the geopolitical situation more complicated. The related increasing bellicose rhetoric can affect global investors' views on, at least temporarily, on the RMB's prospects.

While China continues its efforts to promote the RMB's global use from different policy directions, the trajectory of the RMB global stature as measured by e.g. shares of international reserves and world payments appears to have levelled off. For the RMB to evolve into a key global currency, the process will benefit from deep, liquid, and transparent domestic financial markets with limited capital controls and favorable geopolitical conditions that create credibility and confidence for global investors.

6. Final thoughts

The replacement of an incumbent global currency is a rare occurrence in international finance. The last time it happened was the US dollar replaced the British pound after WWII. There have since been several unsuccessful challenge the US dollar's global dominance by the Deutsche mark, Japanese yen, and the euro.[32] With support from China's extraordinary economic performance, the RMB was seen as in the early 2010s as the latest serious competitor to the US dollar and a credible contender for the global currency title.

Naysayers are quick to point out that the US dollar's global stature was never preordained. The rise of the US dollar was supported by strong US economic and political attributes, not to mention the trust conferred by global investors. These attributes include a dynamic and vibrant US economy, a highly liquid and efficient financial sector, an open and transparent legal system, and global economic and military leadership. With these vital economic and political fundamentals, the US dollar has earned substantial credibility and trust from global investors over time. While some claim that the Trump administration has weakened US economic institutions, its legal system, and diplomatic links, it is unclear how such enfeeblements would give the RMB a definite edge over the US dollar.

Despite China's repeated reassurances, there are concerns about the scope and the pace of its reform programs. Anecdotal evidence suggests that, while China has steadily opened its domestic markets to foreign financial institutions, this has been at a pace set by China. The question thus arises as to whether such policies are likely to make China's promises of unfettered capital flows at market-driven exchange rates convincing to the global community. After all, the confidence of global investors and their trust in the currency affect the rate at which the RMB penetrates international financial markets and gains dominance as the top global currency.

There is no doubt that the RMB is currently under-represented in the global market, and its role is not commensurate with China's global economic importance. The RMB global role will be enhanced over time as China continues to liberalize its financial markets, loosen its grip on the RMB, and reduce restrictions on capital flows. The US dollar has been the top global currency for over 75 years and definitely enjoys an incumbency advantage. China's deliberate and systematic policies will doubtless assist in the RMB's quest for global stature, but they are unlikely to dethrone the incumbent US dollar in the near term.

[32] See Eichengreen and Flandreau (2009), Franke (1999), Frankel (2012), Ministry of Finance, Japan (2003), and Takagi (2011). The euro attempt can be argued as an on-going case (European Commission, 2018).

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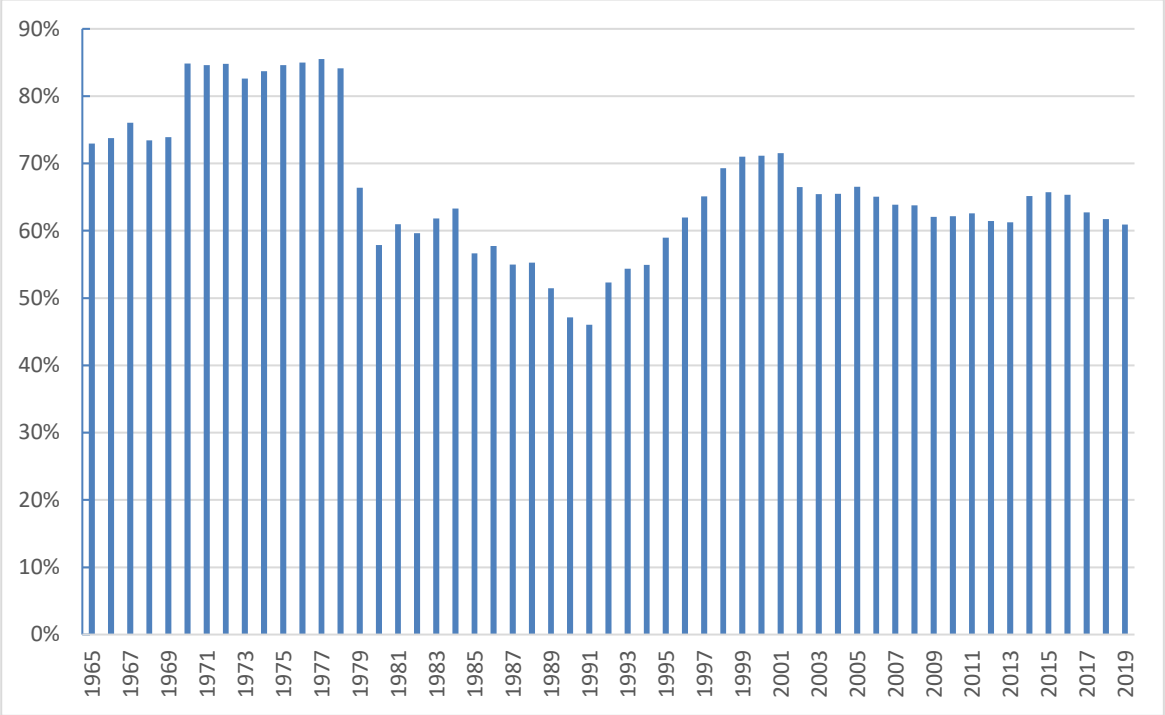
Appendix

A.1. Shares of oil futures trading volume, major crude exchanges (Bloomberg Intelligence).

A.2. US dollar share of allocated global official reserves, 1965–2019 (COFER, IMF)



A3. Direct foreign exchange trading with other currencies

The table lists, besides the Hong Kong dollar and the US dollar, the currencies that have official direct bilateral currency trading arrangements with the RMB in CFETS.

Starting date	Currency
August 2010	Malaysian ringgit
December 2010	Russian ruble
June 2012	Japanese yen
April 2013	Australian dollar
March 2014	New Zealand dollar
June 2014	British pound
September 2014	Euro
October 2014	Singapore dollar
November 2015	Swiss franc
June 2016	Korean won
June 2016	South African rand
September 2016	UAE dirham
September 2016	Saudi riyal
November 2016	Canadian dollar
December 2016	Hungarian forint
December 2016	Danish krone
December 2016	Polish zloty
December 2016	Swedish krona
December 2016	Norwegian krone
December 2016	Turkish lira
December 2016	Mexican peso
February 2018	Thai baht

Table 1. Offshore RMB clearing banks

Offshore financial center	Authorization (PBoC)	Authorized bank
Hong Kong, China	December 2003	Bank of China, Hong Kong
Macau, China	September 2004	Bank of China
Taiwan	December 2012	Bank of China
Singapore	February 2013	Industrial and Commercial Bank of China
London, UK	June 2014	China Construction Bank
Frankfurt, Germany	June 2014	Bank of China
Seoul, South Korea	July 2014	Bank of Communications
Paris, France	September 2014	Bank of China
Luxembourg	September 2014	Industrial and Commercial Bank of China
Doha, Qatar	November 2014	Industrial and Commercial Bank of China
Toronto, Canada	November 2014	Industrial and Commercial Bank of China
Sydney, Australia	November 2014	Bank of China
Bangkok, Thailand	January 2015	Industrial and Commercial Bank of China
Kuala Lumpur, Malaysia	January 2015	Bank of China
Santiago, Chile	May 2015	China Construction Bank
Budapest, Hungary	June 2015	Bank of China
Johannesburg, South Africa	July 2015	Bank of China
Buenos Aires, Argentina	September 2015	Industrial and Commercial Bank of China
Zambia	September 2015	Bank of China
Zurich, Switzerland	November 2015	China Construction Bank
New York, US	September 2016	Bank of China J.P. Morgan (February 14, 2018)
Moscow, Russia	September 2016	Industrial and Commercial Bank of China
Dubai, UAE	December 2016	Agricultural Bank of China
Karachi, Pakistan	May 2018	Bank of China
Tokyo, Japan	October 2018	Bank of China MUFG Bank (May 2019)
Manila, Philippines	September 2019	Bank of China

Sources: Bloomberg, People's Bank of China (PBoC), and State Administration of Foreign Exchange (SAFE).

Table 2. Bilateral RMB Currency Swap Agreements

Signing date	Counterparty	Swap amount
20 January 2009	Hong Kong Monetary Authority	RMB 200 billion and HK$ 227 billion
8 February 2009	Bank Negara Malaysia	RMB 80 billion and MYR 40 billion
11 March 2009	National Bank of the Republic of Belarus	RMB 20 billion and BYR 8 trillion
23 March 2009	Bank Indonesia	RMB 100 billion and IDR 175 trillion
2 April 2009	Central Bank of Argentina	RMB 70 billion and ARS 38 billion
20 April 2009	Bank of Korea	RMB 180 billion and KRW 38 trillion
9 June 2010	The Central Bank of Iceland	RMB 3.5 billion and ISK 66 billion
23 July 2010	Monetary Authority of Singapore	RMB 150 billion and SG$ 30 billion
18 April 2011	Reserve Bank of New Zealand	RMB 25 billion and NZD 5 billion
19 April 2011	Central Bank of the Republic of Uzbekistan	RMB 0.7 billion and UZS 167 billion
6 May 2011	Bank of Mongolia	RMB 5 billion and MNT 1 trillion
13 June 2011	National Bank of Kazakhstan	RMB 7 billion and KZT 150 billion
26 October 2011	Bank of Korea	RMB 360 billion and KRW 64 trillion
22 November 2011	Hong Kong Monetary Authority	RMB 400 billion and HK$ 490 billion
22 December 2011	Bank of Thailand	RMB 70 billion and THB 320 billion
23 December 2011	State Bank of Pakistan	RMB 10 billion and PKR 140 billion
17 January 2012	Central Bank of the United Arab Emirates	RMB 35 billion and AED 20 billion
8 February 2012	Bank Negara Malaysia	RMB 180 billion and MYR 90 billion
21 February 2012	Central Bank of the Republic of Turkey	RMB 10 billion and TRY 3 billion
20 March 2012	Bank of Mongolia	RMB 10 billion and MNT 2 trillion
22 March 2012	Reserve Bank of Australia	RMB 200 billion and AUD 30 billion
26 June 2012	National Bank of Ukraine	RMB 15 billion and UAH 19 billion
7 March 2013	Monetary Authority of Singapore	RMB 300 billion and SG$ 60 billion
26 March 2013	Central Bank of Brazil	RMB 190 billion and BRL 60 billion
22 June 2013	Bank of England	RMB 200 billion and GBP 20 billion
9 September 2013	Hungarian National Bank	RMB 10 billion and HUF 375 billion

Signing date	Counterparty	Swap amount
12 September 2013	Bank of Albania	RMB 2 billion and ALL 35.8 billion
30 September 2013	The Central Bank of Iceland	RMB 3.5 billion and ISK 66 billion
9 October 2013	European Central Bank	RMB 350 billion and EUR 45 billion
25 April 2014	Reserve Bank of New Zealand	RMB 25 billion and NZD 5 billion
18 July 2014	Central Bank of Argentina	RMB 70 billion and ARS 90 billion
21 July 2014	Swiss National Bank	RMB 150 billion and CHF 21 billion
21 August 2014	Bank of Mongolia	RMB 15 billion and MNT 4.5 trillion
16 September 2014	Central Bank of Sri Lanka	RMB 10 billion and LKR 225 billion
11 October 2014	Bank of Korea	RMB 360 billion and KRW 64 trillion
13 October 2014	The Central Bank of the Russian Federation	RMB 150 billion and RUB 815 billion
3 November 2014	Qatar Central Bank	RMB 35 billion and QAR 20.8 billion
8 November 2014	Bank of Canada	RMB 200 billion and CAD 30 billion
22 November 2014	Hong Kong Monetary Authority	RMB 400 billion and HK$ 505 billion
14 December 2014	National Bank of Kazakhstan	RMB 7 billion and KZT 200 billion
22 December 2014	Bank of Thailand	RMB 70 billion and THB 370 billion
23 December 2014	State Bank of Pakistan	RMB 10 billion and PKR 165 billion
18 March 2015	Central Bank of Suriname	RMB 1 billion and SRD 520 million
25 March 2015	Central Bank of Armenia	RMB 1 billion and AMD 77 billion
30 March 2015	Reserve Bank of Australia	RMB 200 billion and AUD 40 billion
10 April 2015	South African Reserve Bank	RMB 30 billion and ZAR 54 billion
17 April 2015	Bank Negara Malaysia	RMB 180 billion and MYR 90 billion
10 May 2015	National Bank of the Republic of Belarus	RMB 7 billion and BYR 16 trillion
15 May 2015	National Bank of Ukraine	RMB 15 billion and UAH 54 billion
25 May 2015	Central Bank of Chile	RMB 22 billion and CLP 2.2 trillion
3 September 2015	National Bank of Tajikistan	RMB 3 billion and TJS 3 billion
26 September 2015	Central Bank of the Republic of Turkey	RMB 12 billion and TRY 5 billion

Signing date	Counterparty	Swap amount
20 October 2015	Bank of England	RMB 350 billion and GBP 35 billion
14 December 2015	Central Bank of the United Arab Emirates	RMB 35 billion and AED20 billion
7 March 2016	Monetary Authority of Singapore	RMB 300 billion and SG$64 billion
11 May 2016	Bank Al-Maghrib, Morocco	RMB 10 billion and MAD 15 billion
17 June 2016	National Bank of Serbia	RMB 1.5 billion and RSD 27 billion
12 September 2016	Hungarian National Bank	RMB 10 billion and HUF 416 billion
27 September 2016	European Central Bank	RMB 350 billion and EUR45 billion
6 December 2016	Central Bank of Egypt	RMB 18 billion and EGP 47 billion
21 December 2016	The Central Bank of Iceland	RMB 3.5 billion and ISK66 billion
19 May 2017	Reserve Bank of New Zealand	RMB 25 billion and NZD5 billion
6 July 2017	Bank of Mongolia	RMB 15 billion and MNT5.4 trillion
18 July 2017	Central Bank of Argentina	RMB 70 billion and ARS175 billion
21 July 2017	Swiss National Bank	RMB 150 billion and CHF21 billion
27 November 2017	Hong Kong Monetary Authority	RMB 400 billion and HK$470 billion
8 January 2018	Bank of Thailand	RMB 70 billion and THB370 billion
30 March 2018	Reserve Bank of Australia	RMB 200 billion and AUD40 billion
3 April 2018	Bank of Albania	RMB 2 billion and ALL34.2 billion
11 April 2018	South African Reserve Bank	RMB 30 billion and ZAR 54 billion
27 April 2018	Central Bank of Nigeria	RMB 15 billion and NGN720 billion
10 May 2018	National Bank of the Republic of Belarus	RMB 7 billion and BYR 16 trillion
23 May 2018	State Bank of Pakistan	RMB 20 billion and PKR351 billion
25 May 2018	Central Bank of Chile	RMB 22 billion and CLP 2.2 trillion
28 May 2018	National Bank of Kazakhstan	RMB 7 billion and KZT350 billion
20 August 2018	Bank Negara Malaysia	RMB 180 billion and MYR110 billion
13 October 2018	Bank of England	RMB 350 billion and GBP 40 billion
26 October 2018	Bank of Japan	RMB 200 billion and JPY3.4 trillion

Signing date	Counterparty	Swap amount
19 November 2018	Bank Indonesia	RMB 200 billion and IDR440 trillion
10 December 2018	National Bank of Ukraine	RMB 15 billion and UAH 62 billion
11February 2019	Central Bank of Suriname	RMB 1 billion and SRD 1.1 billion
13 May 2019	Monetary Authority of Singapore	RMB 300 billion and SG$61 billion
30 May 2019	Central Bank of the Republic of Turkey	RMB 12 billion and TRY10.9 billion
8 October 2019	European Central Bank	RMB 350 billion and EUR45 billion
7 December 2019	Macau Monetary Authority	RMB 30 billion and MOP35 billion
10 December 2019	Hungarian National Bank	RMB 10 billion and HUF 864 billion

Note: All agreements have a maturity of three years and are renewable. Source: Bloomberg, People's Bank of China (PBoC), and State Administration of Foreign Exchange (SAFE).

Table 3. RQFII Accumulated Approved Quota (RMB billion as of December 2019)

Location	Authorized quota limit	Accumulated Approved Quota
Hong Kong	500	345.817
Singapore	100	78.255
United Kingdom	80	48.484
France	80	24.0
South Korea	120	78.887
Germany	80	10.543
Canada	50	8.853
Australia	50	32.006
Switzerland	50	9.6
Luxembourg	50	15.187
Malaysia	50	1.6
Thailand	50	2.1
United States	250	32.52
Ireland	50	1.85
Japan	200	9.0
IMF		1.6
Netherlands	50	
Chile	50	
Hungary	50	
Qatar	30	
UAE	50	

Sources: Bloomberg, People's Bank of China (PBoC), and State Administration of Foreign Exchange (SAFE).

Table 4. FX average daily turnover, economic size, and trade volume

		Turnover share (%)	Turnover/GDP (%)	Turnover/Trade (%)
USD	2019	88.30	27.98	138.27
	2016	87.58	24.20	120.10
	2013	87.04	28.61	122.43
	2010	84.86	23.20	121.02
EUR	2019	32.28	15.77	22.10
	2016	31.39	13.60	20.06
	2013	33.41	14.15	20.24
	2010	39.04	11.78	20.77
JPY	2019	16.81	22.42	75.44
	2016	21.62	24.69	88.16
	2013	23.05	20.66	75.20
	2010	18.99	14.21	61.82
GBP	2019	12.79	29.65	72.45
	2016	12.80	22.26	60.65
	2013	11.82	23.30	54.27
	2010	12.88	20.60	56.33
CNY	2019	4.32	2.09	6.17
	2016	3.99	1.84	5.32
	2013	2.23	1.37	3.00
	2010	0.86	0.65	1.43
HKD	2019	3.53	63.91	19.70
	2016	1.73	28.14	8.33
	2013	1.45	29.12	8.09
	2010	2.37	43.05	13.29

Note: For the SDR currencies and the Hong Kong dollar, the table lists their shares of global FX average daily turnover, average daily turnover to GDP ratios, and average daily turnover to international trade ratios based on data from the Bank for International Settlements (2010, 2013, 2016, 2019), IFS and IMF DOTS.

Table 5. Geographical distribution of global FX turnover

	2010	2013	2016	2019
US	17.9% (2)	18.9% (2)	19.5% (2)	16.5% (2)
Euro Area	9.4% (3)	9.0% (3)	8.2% (3)	6.5% (5)
Japan	6.2% (4)	5.6% (5)	6.1% (6)	4.5% (6)
United Kingdom	36.7% (1)	40.9% (1)	36.9% (1)	43.1% (1)
China	0.4% (23)	0.7% (17)	1.1% (14)	1.6% (9)
Hong Kong	4.7% (7)	4.1% (6)	6.7% (5)	7.6% (4)

Note: For each jurisdiction, the table reports its share of global FX average daily turnover and rank (in parentheses) based on data from the Bank for International Settlements (2010, 2013, 2016, 2019).

Table 6. Global FX reserve holdings (USD billion), selected data

	Q4 2016	Q1 2017	Q4 2017	Q1 2018	Q4 2018	Q1 2019	Q4 2019	Q1 2020
Total	10727.24	10912.28	11457.89	11617.67	11436.07	11610.77	11824.74	11731.94
Allocated	8418.16	8832.16	10012.68	10401.28	10727.03	10897.83	11075.20	10961.62
Unallocated	2309.08	2080.12	1445.21	1216.38	709.04	712.93	749.55	770.32
allocated/total	78.47	80.94	87.39	89.53	93.80	93.86	93.66	93.43
USD	5501.86	5713.17	6280.48	6531.19	6623.30	6727.09	6744.83	6794.91
Euro	1610.82	1703.08	2019.19	2117.51	2217.38	2208.79	2279.30	2197.30
JPY	333.70	400.76	491.01	477.28	557.65	584.63	631.00	624.97
GBP	365.09	376.98	454.12	486.13	474.17	495.70	511.51	486.08
RMB	90.29	94.89	123.47	145.67	203.08	212.26	215.81	221.48
Allocated shares								
USD	65.36	64.69	62.73	62.79	61.74	61.73	60.90	61.99
Euro	19.14	19.28	20.17	20.36	20.67	20.27	20.58	20.05
JPY	3.96	4.54	4.90	4.59	5.20	5.36	5.70	5.70
GBP	4.34	4.27	4.54	4.67	4.42	4.55	4.62	4.43
RMB	1.07	1.07	1.23	1.40	1.89	1.95	1.95	2.02
SDR-5	93.87	93.85	93.56	93.81	93.93	93.86	93.75	94.19
Other	2.34	2.32	2.43	2.45	2.47	2.42	2.54	2.33

Note: Global FX reserves holdings in selected currencies and as of selected dates extracted from COFER, IMF.

Table 7. Correlation between specific currency share and total FX share

	2010	2013	2016	2019
USD	0.9997	0.9998	0.9996	0.9997
Euro	0.9897	0.9907	0.9810	0.9888
GBP	0.9796	0.9862	0.9862	0.9867
JPY	0.8911	0.9611	0.9188	0.9279
RMB	0.4719	0.4247	0.5257	0.4941

Note: For a given currency and a given year, the fable reports the correlation between a financial center's share of the currency's turnover and its share of total FX trading.

Table 8. The top four Offshore RMB FX Trading Centers

Rank	2010	2013	2016	2019
1	Hong Kong 36.33	Hong Kong 43.38	Hong Kong 38.58	Hong Kong 41.41
2	Singapore 25.30	United Kingdom 21.29	Singapore 21.29	United Kingdom 21.80
3	United Kingdom 23.01	Singapore 20.92	United Kingdom 19.56	Singapore 16.38
4	United States 10.28	United States 7.56	United States 12.13	United States 11.49

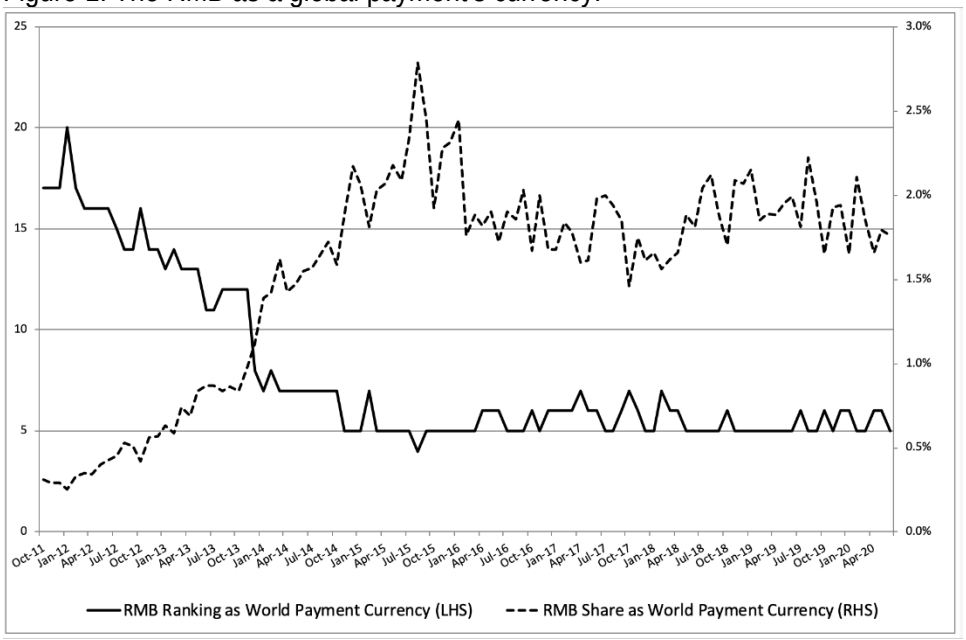
Note: The table lists the top four offshore RMB FX trading centers as reported in the corresponding BIS triennial survey. Each trading center's share of offshore RMB trading in percentage is given under its name.

Table 9. Growth of offshore and onshore trading

	2010-13	2013-16	2016-19
USD (total)	35.56	-1.64	27.32
onshore	42.60	-1.60	10.39
offshore	33.99	-1.65	31.34
Euro (total)	13.59	-8.96	30.90
onshore	20.06	-9.80	7.17
offshore	12.44	-8.80	35.35
GBP (total)	21.93	4.11	28.08
onshore	28.47	-6.05	48.47
offshore	14.82	16.47	8.07
JPY (total)	62.91	-5.31	-2.36
onshore	13.50	11.88	-7.51
offshore	80.88	-9.24	-0.91
RMB (total)	276.74	72.90	41.54
onshore	244.07	65.14	82.87
offshore	287.56	75.18	30.08
Global FX turnover	33.15	-2.98	26.61

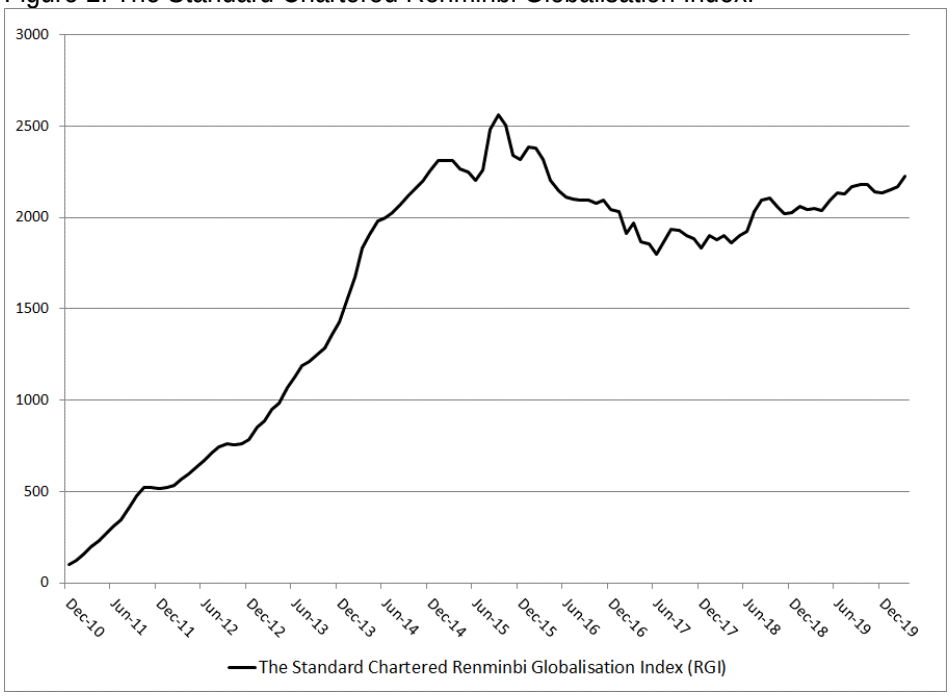
Note: The table presents the growth of FX trading turnover over the BIS triennial surveys indicated in the column headings. For each SDR currency, it reports the growth rates in percentage of the currency's turnover, of its onshore trading, and its offshore trading. The row labelled "Global FX turnover" gives the growth rates of the global FX turnover across these surveys.

Figure 1. The RMB as a global payment's currency.



Source: SWIFT RMB Tracker (various issues).

Figure 2. The Standard Chartered Renminbi Globalisation Index.



Source: Standard Chartered Bank (https://research.sc.com/rgi-dashboard/).

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