A CONCEPTUAL FRAMEWORK OF DRIVERS BEHIND THE INTERNATIONAL USE OF THE CHINESE CURRENCY RENMINBI

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Abstract: A currency can be considered to be 'international' if it is used offshore for trade and investment. There are strong natural drivers behind the international use of the renminbi (RMB). In January 2018, Germany's central bank, the Bundesbank decided to include China's currency in its foreign exchange reserves. Continued growth may well be slow, some observers believe, because only a small portion of global payments are conducted in RMB, foreign ownership of Chinese stocks and bonds is low, very little trade is invoiced in RMB and only 16 percent of Chinese trade itself is settled in RMB. This paper analyses the macroeconomic variables that determines the currencies' shares in the international bond market, for the five currencies of the SDR Basket: RMB, EUR, GBP, JPY, and USD. It was noticed that the share of international bonds is influenced by the size of the economy, by inflation rates and by the yield spread. Moreover, they suggest that the determinants do not present a homogenous pattern. The estimated coefficients differ not only between currencies but also between regions under the same currency. The study indicates that the expansion of the Chinese economy is likely to support the internationalization of the currency across all regions and that the USD has a distinctive role that has not yet been achieved by any other currency.

Keywords: **International Currencies, International Bonds, Renminbi, SDR**

I. INTRODUCTION

A currency can be considered to be 'international' if it is used offshore for trade and investment. There are strong natural drivers behind the international use of the renminbi (RMB). As businesses become more comfortable using the RMB, the currency is likely to become increasingly internationalised. Unlike other cases of currency internationalisation in the 20th century, Chinese authorities began promoting the use of the RMB outside its borders in 2009 while still maintaining extensive controls on capital flows and a tightly regulated financial market (McCauley 2011)

The SDR was created as a supplementary international reserve asset in the context of the Bretton Woods fixed exchange rate system. The collapse of Bretton Woods system in 1973 and the shift of major currencies to floating exchange rate regimes lessened the reliance on the SDR as a global reserve asset. The SDR is neither a currency nor a claim on the IMF. Rather, it is a potential claim on the freely usable currencies of IMF members. SDRs can be exchanged for these currencies.

A basket of currencies determines the value of the SDR. The SDR value in terms of the U.S. dollar is determined daily based on the spot exchange rates observed at around noon London time, and posted on the IMF website. The SDR was initially defined as equivalent to 0.888671 grams of fine gold—which, at the time, was also equivalent to one U.S. dollar. After the collapse of the Bretton Woods system, the SDR was redefined as a basket of currencies.

The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the SDR reflects the relative importance of currencies in the world's trading and financial systems. The reviews cover the key elements of the SDR method of valuation, including criteria and indicators used in selecting SDR basket currencies and the initial currency weights used in determining the amounts (number of units) of each currency in the SDR basket. These currency amounts remain fixed over the five-year SDR valuation period but the actual weights of currencies in the basket fluctuate as cross-exchange rates among the basket currencies move. The value of the SDR is determined daily based on market exchange rates. The reviews are also used to assess the appropriateness of the financial instruments comprising the SDR interest rate (SDRi) basket.

During the last review concluded in November 2015, the Board decided that the Chinese renminbi (RMB) met the criteria for inclusion in the SDR basket. Following this decision, the Chinese RMB joined the US dollar, euro, Japanese yen, and British pound sterling in the SDR basket, effective October 1, 2016.

Currency	**Weights determined in the 2015 Review**	**Fixed Number of Units of Currency for a 5-year period Starting Oct 1, 2016**
U.S. Dollar	41.73	0.58252
Euro	30.93	0.38671
Chinese Yuan	10.92	1.0174
Japanese Yen	8.33	11.9
Pound Sterling	8.09	0.085946

Source:https://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/14/51/Special-Drawing-Right-SDR.

Effective on October 1st 2016, the inclusion of the Renminbi in the SDR Basket represents the beginning of a new era for the Chinese Currency and for the International Monetary System (IMS). The rise of China as one of the world's largest exporters in the five year period that preceded the review and Renminbi is now considered "freely usable".

According to the definition stated on the IMF's Articles of Agreement: "A freely usable currency eans a member's currency that the Fund determines (i) is, in fact, widely used to make payments for international transactions, and (ii) is widely traded in the principal exchange markets." (Article XXXf, IMF, 2016). Based on the factors determining the currencies weight in the SDR Basket, the CNY will represent, on October 1st 2016, 10.92% of the SDR Currency Basket surpassing the JPY (down from 9.4% in 2010 to 8.33% in 2015) and the GBP (down from 11.3% in 2010 to 8.09% in 2015). In January 2018, Germany's central bank, the Bundesbank decided to include China's currency in its foreign exchange reserves.

II. OBJECTIVE OF STUDY

1) To review the factors drive the units of the SDR Basket.
2) To explore the use of currencies as a store of value and unit of account.
3) To understand economic and financial factors that influence the share of international currencies have the same impact over the share of each of the five currencies.

III. LITERATURE REVIEW

- **Three Functions Of Money**

Money is any good that is widely accepted in exchange of goods and services, as well as payment of debts. Most people will confuse the definition of money with other things, like income, wealth, and credit. Three functions of money are:

a) **Medium of exchange:** Money can be used for buying and selling goods and services. If there were no money, goods would have to be exchanged through the process of barter (goods would be traded for other goods in transactions arranged on the basis of mutual need). A third currency used to mediate economic transactions between importers and exporters is a vehicle currency, functioning as a medium of exchange. In international transactions between two countries with small economies, it can be convenient for both to settle trade through a foreign trade vehicle currency, in order to diminish transaction costs based on the strategic externalities (e.g., a large percentage of international trade with the country of the vehicle currency) or economies of scale (a large community widely using and accepting the vehicle currency) that the vehicle currency might be able to provide (Matsuyama et al., 1993).

b) **Unit of account:** Money is the common standard for measuring relative worth of goods and service. A currency functions as an invoicing currency whenever it is used to denominate trade or financial transactions

c) **Store of value:** Money is the most liquid asset (Liquidity measures how easily assets can be spent to buy goods and services). Money's value can be retained over time. It is a convenient way to store wealth. A currency that is widely used internationally, often presents a stable value with relatively low volatility, enabling both private and official agents to hold it, without losing wealth through constant corrosives processes of devaluation (Chinn and Frankel, 2008). Therefore, functioning as an investment or reserve currency.

- **Determinants Of Currencies' International Use**

The literature in international currencies defines some economic and financial factors that contribute to the international use of currencies.

a) **Output Size and Trade:** Large economies are more likely to achieve low transaction costs making their currencies more attractive to be used in international trade and cross-border financial transactions. Additionally, larger economies present a "high-density network of trading relationships" to foreign agents, making the currencies of these countries more attractive (Chen and Peng, 2010). Similarly, trade is also considered by the literature as an explanatory variable influencing the international status of a currency.

b) **Stability of a currency's value:** Stability is an important factor, so that investors and economic agents do not see the value of their assets erase. Inflation contributes to undermine currency's value, higher inflation have positive impact in debt issuances at an international level.

c) **Financial Markets Development:** The most broadly used proxy to capture financial markets development is foreign exchange turnover. gross domestic savings as a ratio to GDP and total private credit creation to examine the development of financial markets. Finally, the stock market capitalization is also considered as an alternative to measure of financial market development

d) **Persistence and Network Externalities :** International currencies can be considered a tipping phenomenon. The derivative of currency's use with respect to its determinants might be greater when one currency overcomes and surpasses the other. Hence, they can accelerate the shift in the international order.

- **Factors Influencing Currency Choice in Debt Issuance**

a) **Interest Rate Differential:** The government bond interest rate depends on the monetary and fiscal policies adopted by the country and, of course, by their creditworthiness. Therefore, interest rate differential might arise, for instance, in virtue of divergent monetary policies of different central banks. Habib and Joy (2008) present the most complete study regarding uncovered and covered interest parity. They use bond-data to verify the existence of deviations from the equilibrium parities and their significance for the issuance of foreign-currency denominated debt.

b) **Hedging Motives:** The presence of foreign operations leads firms to issue in foreign currency arise from firm-level studies by various researchers.

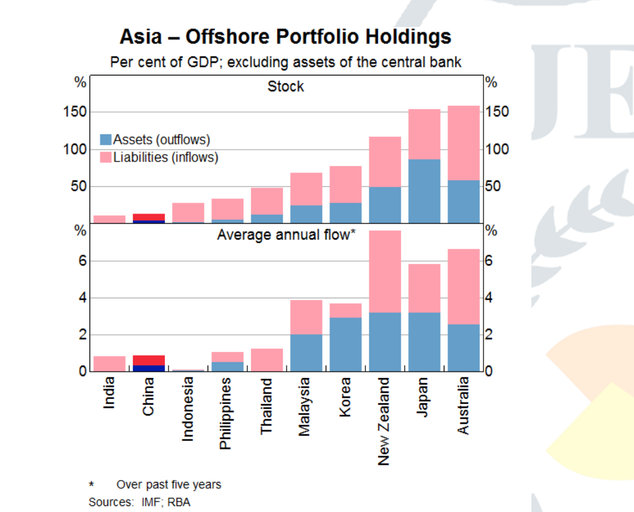
IV. DATA AND METHODOLOGY

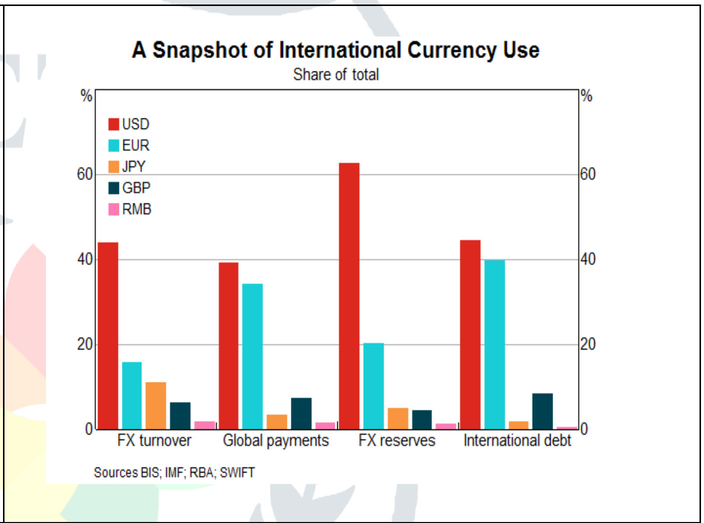
The paper covers the period after the internationalization of the RMB. Although the first issuance occurred in 2007, between the last quarter of 2008 and the third quarter of 2009 there was no issuances. Therefore, the data from third quarter of 2009 consider as it the date from which the RMB offshore bonds have been issued ever since. The data was extracted from the Bloomberg Terminal. The dependent variable used to study the international role of currencies is the share of international bonds issued in a given currency. The definition we intend to use is closely related with the one used by the BIS

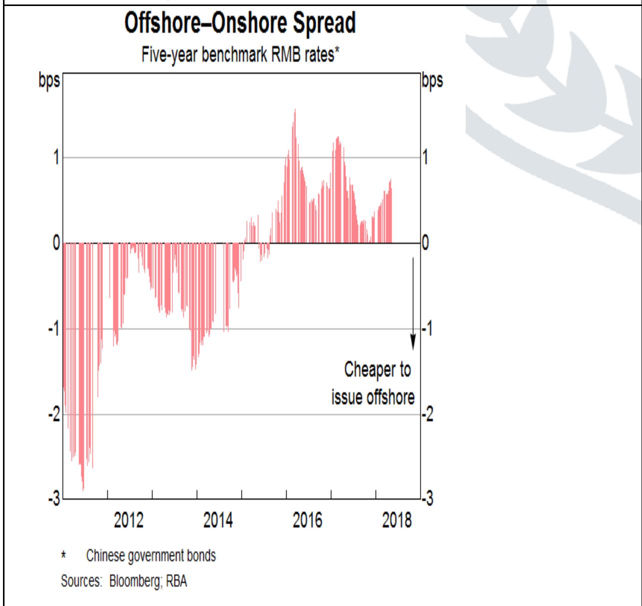
V. RESULTS AND DISCUSSION

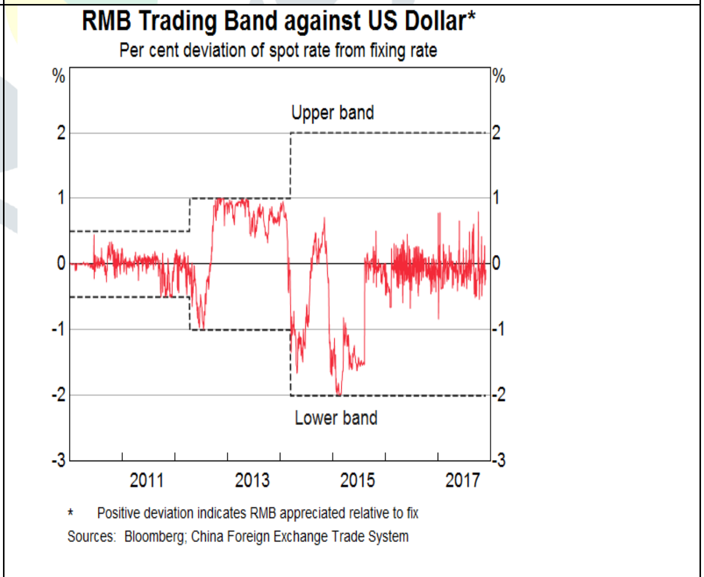
INTERNATIONALIZE THE RMB : In some ways, it is easy to appreciate why the authorities have sought an internationalised currency – a policy push that began meaningfully in 2009.

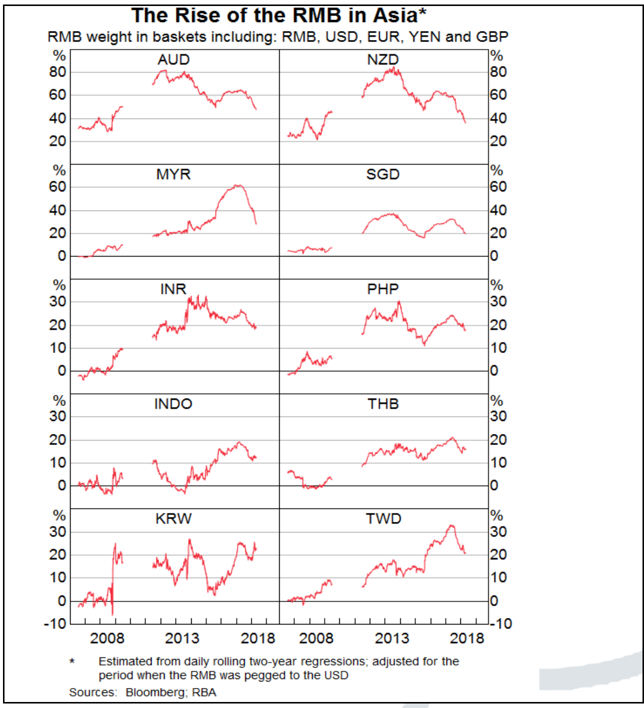
- Important symbolic benefits come from issuing a currency that is recognised internationally. Such recognition provides an implicit 'seal of approval' for China's markets, institutions and policies (Bernanke 2015).
- Tangible benefits can also follow from issuing an international currency. It is often argued that the US dollar's international role confers a so-called 'exorbitant privilege', which is reflected in a lower-than-otherwise interest rate on US dollar financial assets. This allows the United States to hold a net foreign liability position (with US residents holding fewer offshore assets than foreign holdings of US assets), but have a net income surplus (with US residents earning more on their total holdings of offshore assets than foreigners earn on their holdings of US assets). (McCauley 2015)
- Greater use of the RMB in trade reduces exchange rate risks and provides greater convenience for Chinese exporters and importers whose other costs and revenues are mostly in local currency terms.
- Greater use of the RMB reduces the exposure of China's tradeable sector to sudden falls in the global supply of US dollars. A reduction in US dollar liquidity during the global financial crisis has been cited as a contributor to the substantial fall in Chinese exports during that time (IMF 2009).
- RMB internationalisation reduces borrowing costs for Chinese firms by increasing access to offshore RMB funding markets. An offshore pool of RMB and the development of an offshore RMB bond market – the so-called 'dim sum' market – have allowed mainland Chinese firms to borrow offshore at rates that have often been lower than those available in the onshore market. Borrowing offshore in local currency also reduces the exposure of Chinese firms to exchange rate risks.

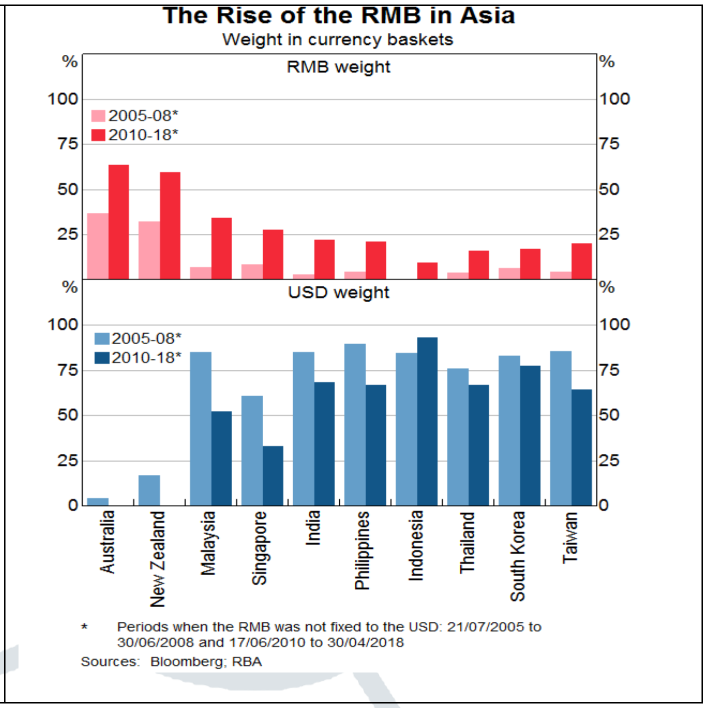












The two measures of the size of the economy (the GDP share and the Bilateral Trade Share) present high levels of correlation for some currencies (see Table 1). In order to avoid problems with multicollinearity two different specifications for compute had been used. For computed purpose one with the GDP share and the other one with the bilateral trade share as a covariate for all equations but maintaining the two in those equations where the correlation is less than 0.8, in absolute value.

Table 1: Correlation between GDP Share and Bilateral Trade Share

	***i* = CNY**	***i* = EUR**	***i* = GBP**	***i* = JPY**	***i* = USD**
	GDP Share currency *RMB*	GDP Share currency *EUR*	GDP Share currency *GBP*	GDP Share currency *JPY*	GDP Share currency *USD*
Currency *i* Bilateral Trade Share - Europe (t-1)	**0.9691**	**0.8199**	0.4888	0.5535	-0.4725
Currency *i* Bilateral Trade Share - America (t-1)	**0.9483**	**0.9652**	0.6804	0.4728	0.6592
Currency *i* Bilateral Trade Share - Asia, Oceania and Africa (t-1)	**0.9904**	**0.9759**	**0.9040**	0.5886	**0.8561**

Bond Connect has been gathering momentum since its launch on 3 July 2017 to offer China Interbank Bond Market (CIBM) access to a broader group of international investors. The scheme's participants have welcomed its streamlined and simplified admission procedure and other access benefits. As of end of December 2017, 247 overseas investors from 18 countries are approved under Bond Connect. Total foreign holdings of the domestic debt securities in CIBM increased significantly from RMB 842.5 billion to a record level of RMB 1,147.4 billion as of 31 December 2017, an increase of 36 percent in the six months since the launch of Bond Connect. The innovations under Bond Connect are manifested in the areas of market admission in pre-trade, price discovery and efficiency in trading, and settlement arrangements in post trade. It effectively connects the Mainland bond market with international practices, at lower access costs and higher market efficiency.

Developments in the foreign exchange (FX) market in 2017 have also had a significant impact on RMB usage. The rapid appreciation of the RMB may have caught market players, including the People's Bank of China (PBOC) off guard, according to Barron's. As a result, the PBOC had to take extensive measures to keep the currency from over passing and to keep overall macro stability in the Chinese system. PBOC announced in September 2017 that it was removing the 20 percent reserve requirement for onshore financial institutions to set aside when buying FX forwards for clients, a rule that was introduced on 15 October 2015 to reduce capital outflows. It also said it would scrap the reserve requirement for offshore banks' interbank RMB deposits to be held onshore.

In January 2018, PBOC decided to relax currency controls by removing the counter cyclical factor from the formula to calculate the daily Yuan fixing. The main effect is to allow higher two-way volatility in the exchange rate and amplified the strong euro impact on the Yuan. As stated in global benchmark the 2016 Triennial Survey whilst the renminbi was the most actively traded emerging market currency, and the world's eighth most actively traded currency, its share in global FX turnover by value is only 4 percent.

VI. CONCLUSION

An important expect of this paper is that the internationalization of the RMB has to be viewed in the broader context of China's financial and economic reforms. The first phase of the policy push (spanning 2009 to 2015) served as a catalyst for important financial reforms in China. These reforms have allowed market forces to play a more decisive role in the allocation of resources in the economy, and further opened China up to the rest of the world. The accumulation of RMB deposits and the recycling of these back into Chinese markets will significantly increase direct financial linkages between the Asian region and China.

The share of international bonds is influenced by the size of the economy, by inflation rates and by the yield spread. The size of the economy has a positive impact over the share of a given currency among the issuers that belong to the region of the currency. The impact of the bilateral trade share over the share of international bonds is higher than the impact produced by an increase in the share of the Chinese GDP.

The spread of government bond yields suggest that the US Dollar has a distinctive role that has not yet been achieved by any other currency. The US Dollar is the currency which is not used by investors as a "search of yield" currency. The share of the Euro, the second most important currency worldwide, responds positively to an increase in the spread in regions other than Europe. The Chinese Renminbi and the Japanese Yen respond positively to a wider spread between the local government bond and the government of the reference currency. The rise has come during a concerted effort by Beijing to clamp down on capital flight, which was driving down the value of the Chinese currency.

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