

Internationalisation of the Rupee

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Abstract

The Indian Rupee currently accounts for approximately 1% of global foreign exchange turnover. It has a smaller market size across most trading instruments when compared to the top 8 emerging market currencies. In this paper, we evaluate the current status of the Indian Rupee as an international currency using the Chinn and Frankel (2008) framework, and explore the possibility of future Indian Rupee internationalisation. We find that the Indian Rupee has a negligible role as an official sector currency. It has some use as a reserve currency in its economic sphere of influence, but no role as an anchor or intervention currency. Private actor adoption of the Indian Rupee is much larger and more diverse than the official sector. However, this role is mostly restricted to financial flows and portfolio investment. In terms of trade invoicing and settlements in the private sector, the Indian Rupee plays a limited role due to concerns of convertibility and risk management. Given the current path of exchange control and capital account liberalisation, we anticipate gradual internationalisation of the Indian Rupee due to regional competition from the Renminbi.

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1 Introduction

The global financial crisis (GFC) of 2008, for a variety of complex reasons, prompted emerging markets (EMs) to reconsider the role of their currencies as global alternatives to the “big four” currencies.¹ Zhou (2009) argued that the outbreak of the GFC and its spillover to the entire world reflected the inherent vulnerabilities and systemic risks in the existing international monetary system. This was an indirect assertion that US was taking advantage of the reserve currency status of the US dollar and dollar liquidity shortages were a real problem for EMs during the GFC (Ito, 2016). China in response embarked on an ambitious project of “Renminbi internationalisation” with the coupled goals of international monetary reform and diversification of global currency risk through internationalising its currency (Gao *et al.*, 2011; Lee, 2014; Eichengreen, 2013; Shu *et al.*, 2015).

China’s policy pivot prompted policy makers in India to consider the possibility of internationalising the Indian Rupee (INR). The Reserve Bank of India (RBI) commissioned two studies in 2010 and 2011 (Ranjan and Prakash, 2010; Gopinath, 2011) to examine the issues surrounding the internationalisation of the INR. Both studies recommended a cautious approach towards currency internationalisation given the size of the Indian GDP, lower presence in global trade and partial capital account convertibility. They also added that while the Rupee is a natural contender for transitioning into a global currency, policy-makers should start by increasing the role of the INR in its local region where the Renminbi has taken a lead over the Rupee. In spite of an early interest in pursuing a policy of currency internationalisation, both the Indian government and the RBI do not consider it to be a priority in the short to medium term.^{2 3}

In this paper, we evaluate the current status of the Rupee as an international currency and look at the possibility of future INR internationalisation. Section 2 revisits the definition of an international currency and looks at the pre-conditions for currency internationalisation. We compare the growth of currency markets in EMs and discuss the roles of macroeconomic fundamentals in currency internationalisation in Section 3. We summarise the role of the INR as an international currency in Section 4. Section 5 concludes by discussing some near term measures that may be undertaken to accelerate the process of internationalisation. We also try and place Rupee internationalisation in the broader process of financial and exchange control liberalisation.

2 What is meant by the internationalisation of the Rupee?

There is a well established literature to define what is meant by an internationalisation of a currency (Eichengreen and Flandreau, 2012). According to Kenen (2011), an international currency is one that is used and held beyond the borders of the issuing country, not merely

¹US Dollar, Euro, British Pound and Japanese Yen

²Lok Sabha question answered by Jayant Sinha, Minister of State, Finance <https://goo.gl/TbWRxD>

³Response by Governor Raghuram Rajan on Rupee internationalisation <https://goo.gl/eYPcCK>

for transactions with that country's residents but also, and importantly, for transactions between non-residents. Chinn and Frankel have developed a framework based on international functions of a currency to determine the level of its internationalisation. Table 1 shows the various roles of an international currency. The “big four” currencies fulfill all the 6 roles of an international currency. BRICS currencies may fulfill some if not all private roles but have a limited role as an international currency in the official sector. We will use this framework to evaluate the internationalisation of the Rupee in Section 4.

Table 1 Roles of an international currency; based on Chinn and Frankel (2008)

| Function of money | Governments | Private actors |
|--------------------|--------------------------------------|---|
| Store of value | International Reserves | Currency substitution and investment |
| Medium of exchange | Vehicle currency for FX intervention | Invoicing trade and financial transactions |
| Unit of account | Anchor for local currency pegging | Denominating trade and financial transactions |

Kenen (2011) also enumerates the process of internationalisation of a currency including the necessary preconditions. They are as follows:

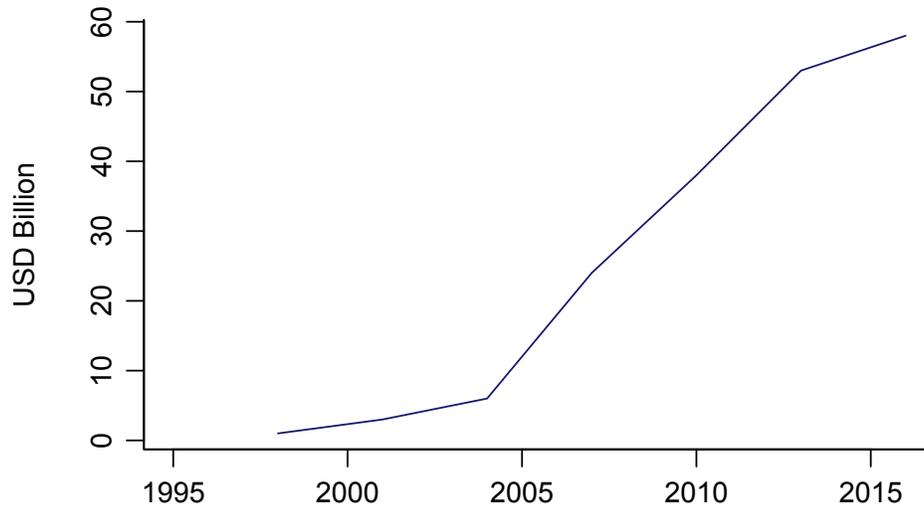
1. The government must remove all restrictions on the freedom of any entity, domestic or foreign, to buy or sell its country's currency, whether in the spot or forward market
2. Domestic firms are able to invoice some, if not all, of their exports in their country's currency, and foreign firms are likewise able to invoice their exports in that country's currency, whether to the country itself or to third countries
3. Foreign firms, financial institutions, official institutions and individuals are able to hold the country's currency and financial instruments denominated in it, in amounts that they deem useful and prudent
4. Foreign firms and financial institutions, including official institutions, are able to issue marketable instruments in the country's currency
5. The issuing country's own financial institutions and non-financial firms are able to issue on foreign markets instruments denominated in their country's own currency
6. International financial institutions, such as the World Bank and regional development banks, are able to issue debt instruments in a country's market and to use its currency in their financial operations.
7. The currency may be included in the “currency baskets” of other countries, which they use in governing their own exchange rate policies

A national currency may be regarded as internationalised if most of the above conditions hold. Please note that condition 1 is a binding constraint to currency internationalisation of a national currency. Given that the BRICS countries have imperfect capital account convertibility, most of the internationalisation is driven by the trade channel and growth of bilateral trade. Currency invoicing (condition 2) seems to be independent of capital account convertibility problems as long as there is an adequate volume of trade and some basic accessibility to hedging markets, natural hedges or forward contracts. The BRICS countries have liberalised their investment frameworks considerably over the last 20 years and condition 3 and 4 holds for most large EM currencies including the INR. However, condition 5 is not met by any large EM as the problem of “original sin” makes raising foreign debt in foreign currency easier than raising foreign debt in local currency. Condition 6 is partially met by BRICS countries being involved in the New Development Bank (NDB) and Asian Infrastructure Investment Bank (AIIB) (Dixon *et al.*, 2015). However, it is interesting to note that only China has raised capital in local currency terms in the local market from the NDB, whereas Brazil, Russia, India and South Africa (BRIS) all raised funding in dollars. Condition 7 is the last stage in the internationalisation of a currency and there is increasing evidence that the Renminbi is being held as a reserve currency whereas the BRIS currencies are only used in their local regions (Eichengreen *et al.*, 2015).

Irrespective of capital controls, there has been tremendous growth in the trading of BRICS currencies in the last 20 years. We shift gears and look at market outcomes in Section 3 to get a sense of what drives growth of currency markets and how internationalised is the Rupee compared to the BRICS currencies.

3 Rise of Rupee trading

Figure 1 Average daily turnover in the Rupee since 1995



Source: BIS triennial survey 2016, Table D11.3, All instruments, net-net basis

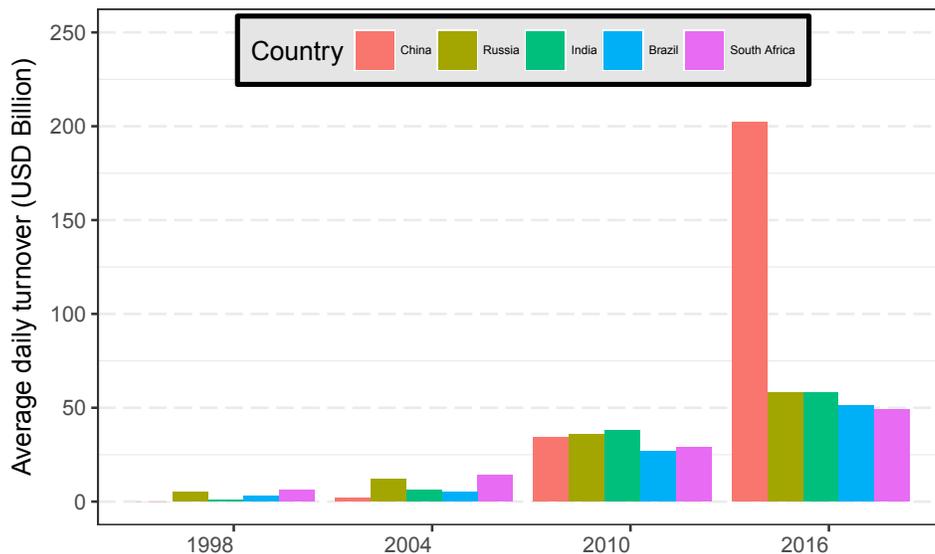
The triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity published by BIS is currently the most comprehensive source of information on trading in FX markets (BIS, 2010, 2013, 2016). The survey provides consistent comparison on the size and structure of FX and OTC derivatives markets, and has been conducted every 3 years since 1995. In the latest edition of the survey, data was collated for 53 currencies, encompassing instruments such as spot transactions, outright forwards, foreign exchange and currency swaps and options. Central banks collect data from various banks and other dealers within their jurisdictions, which is reported to BIS and used to calculate global aggregates. For the first time since 2001, global FX trading declined between two consecutive surveys. Global FX turnover fell to \$5.1 trillion per day in April 2016, from \$5.4 trillion in April 2013. However, trading in EM currencies grew over this period with the Renminbi gaining market share (Moore *et al.*, 2016). The “big four” currencies maintained their market shares and remain the only currencies which account for more than 10% market share of all trades.⁴ As per the BIS, the INR was ranked 20th by average daily turnover, across all FX instruments in April 2016. There average daily turnover in the INR has increased almost 20 times from USD 3 Billion in 2001 to USD 58 Billion in 2016 (See Figure 3).

The BIS data has its limitations and might be an underestimate of forex trading volumes for four reasons. Firstly, it does not provide much information on the time series behaviour of trading volumes (Galati, 2000), or of offshore OTC data, due to its low frequency of

⁴As of 2016; USD: 88% EUR: 31% JPY:22% GBP:13% is on the other side of all the reported currency trades

three years. Second, data from BIS may not capture activities of non-bank players (King and Mallo, 2010). For example, if a hedge fund sends an order to an exchange, it is likely to elude the measurement of the BIS. Three, there are some internal discrepancies in the data, and the offshore figures quoted are only for the OTC market. Fourth, the survey is conducted on a representative sample of market participants for a short period in April; where volumes may be low for seasonal reasons.⁵ It is for these reasons that we believe that the forex market is bigger than currently estimated by the BIS and the current estimates should be seen as lower bound. Kumar *et al.* (2015) find that average daily Rupee turnover is between USD 80-100 Billion once they account for the undercounting by the BIS. Nevertheless, for purposes of cross-country comparison we use the BIS measure for the remainder of this paper.

Figure 2 Average daily turnover in BRICS currencies since 1995



Source: BIS Triennial Survey 2016, Table D11.3, All instruments, net-net basis

Figure 3 shows that trading in BRICS currencies grew on average at 20% every year between 2001-2010. During this period the levels of trading in the BRICS currencies were also comparable with average daily turnover averaging between USD 20-50 Billion. After 2010, trading in the Renminbi grew rapidly as Chinese authorities start pursuing a policy of internationalisation. The Brazilian Real (BRL), South African Rand (ZAR) and Russian Ruble (RUB) grew faster than the INR after 2010 but they pare their gains after the taper tantrum of 2013. As of April 2016, the sum of the average daily turnover in the BRIS currencies was roughly equal to the daily turnover in the Renminbi. We extend our sample to large EMs (including the BRICS) tracked by the BIS to include the Turkish Lira, the Korean Won and the Mexican Peso to look at the INR’s position amongst peer currencies in Table 2. INR turnover was ranked 6th amongst a set of 8 comparable EMs and INR lost

⁵Indian financial year is from April to April.

some ground compared to this group after 2010.⁶ Moreover, the swap and option markets for the INR were relatively small in comparison to the RUB and RMB.

Table 2 Ranking Rupee turnover versus large EM currencies, Split by instrument

| | Spot | Forwards | FX swaps | Currency swap | Options | Total |
|-----|------|----------|----------|---------------|---------|-------|
| INR | 6 | 4 | 7 | 7 | 6 | 6 |
| TRY | 5 | 7 | 2 | 1 | 5 | 4 |
| ZAR | 7 | 8 | 5 | 2 | 7 | 8 |
| RUB | 4 | 6 | 4 | 6 | 8 | 5 |
| MXN | 2 | 5 | 3 | 8 | 3 | 2 |
| KRW | 3 | 1 | 6 | 5 | 4 | 3 |
| BRL | 8 | 3 | 8 | 4 | 2 | 7 |
| CNY | 1 | 2 | 1 | 3 | 1 | 1 |

Source: BIS Triennial Survey 2016

Ma and Villar (2014) use foreign exchange turnover as one of the proxies for identifying the extent of internationalisation of a currency, as it helps shed light on the currency's use by non-residents. As a currency internationalises, we can expect to see greater trading to take place in offshore financial centres. By this metric India ranks 6th or 7th amongst comparable EM currencies depending on whether we consider Hong Kong an extension of the Chinese onshore market (Table 3). Only the RUB has more onshore trading than the INR. As a comparison, INR's onshore share has been consistent at 41-44% between 2013-2016 whereas the RUB's onshore share increased from 47-56% in the same period.

Table 3 Location of currency trading by EM currency

| Location | INR | TRY | ZAR | RUB | MXN | KRW | BRL | CNY |
|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Brazil | 0 | 0 | 0 | 0 | 1 | 0 | 25 | 0 |
| China | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 |
| Hong Kong SAR | 8 | 1 | 1 | 0 | 1 | 16 | 2 | 31 |
| India | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Korea | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 |
| Mexico | 0 | ... | ... | ... | 16 | 0 | 0 | 0 |
| Russia | ... | 0 | 0 | 56 | 0 | ... | 0 | 0 |
| Singapore | 24 | 2 | 2 | 0 | 1 | 21 | 0 | 17 |
| South Africa | 0 | 0 | 24 | 0 | 0 | ... | ... | 0 |
| Turkey | 0 | 13 | 0 | 0 | ... | ... | ... | 0 |
| United Kingdom | 13 | 61 | 44 | 29 | 29 | 13 | 21 | 16 |
| United States | 8 | 15 | 19 | 8 | 43 | 9 | 45 | 9 |
| ROW | 3 | 9 | 10 | 7 | 9 | 3 | 6 | 5 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Source: BIS Triennial Survey 2016, Table 7

⁶Refer to <https://goo.gl/71HJqu>

If we compare the change in onshore shares between 2013 to 2016 (Table 4), there is substantial heterogeneity in our sample of EM currencies. TRY, KRW, MXN and CNY have become more internationalised over 2013-16 whereas ZAR, INR, RUB and BRL have gained onshore trading shares. The INR was ranked 6th amongst peers by this proxy of currency internationalisation as well.

Table 4 Change in percentage of onshore trading since 2013; Author's calculations

| Currency | 2013 | 2016 | Change |
|--------------------|------|------|--------|
| INR | 41 | 44 | 7.32 |
| TRY | 19 | 13 | -31.58 |
| ZAR | 23 | 24 | 4.35 |
| RUB | 48 | 56 | 16.67 |
| MXN | 20 | 16 | -20.00 |
| KRW | 53 | 38 | -28.30 |
| BRL | 20 | 25 | 25.00 |
| CNY (Including HK) | 57 | 53 | -7.02 |

3.1 NDF markets in the INR

Non-Deliverable Forwards (NDF) differ from outright forward contracts where the counterparties enter into a binding contract for a physical exchange of funds. NDF contracts while similar in nature, impose no such restriction, allowing counterparties to settle profits or losses on a notional amount without any physical exchange of funds. These contracts are usually cash settled, denominated in USD, and traded on currencies which are not readily available to trade globally. EM currencies, characterized by partial capital account convertibility, form a bulk of NDF markets mainly because participants engaged in trade and capital flows with these countries face barriers in access to domestic foreign exchange markets.

In 2013, the estimated average daily turnover of NDF markets was USD 127 billion, accounting for 19% of all outright forwards contracts traded globally (BIS, 2013). This figure has grown by 5.3% in dollar terms to 134 Billion in 2016 (BIS, 2016). Four BRICS currencies (excluding South Africa) contributed 36% to this turnover in 2016, down from 42% in 2013. The decline has mainly been on account of China's decreasing share (approximately 40% decline) of NDF markets, with their offshore NDF markets being replaced with offshore, deliverable forwards owing to Renminbi's internationalization in the recent years.

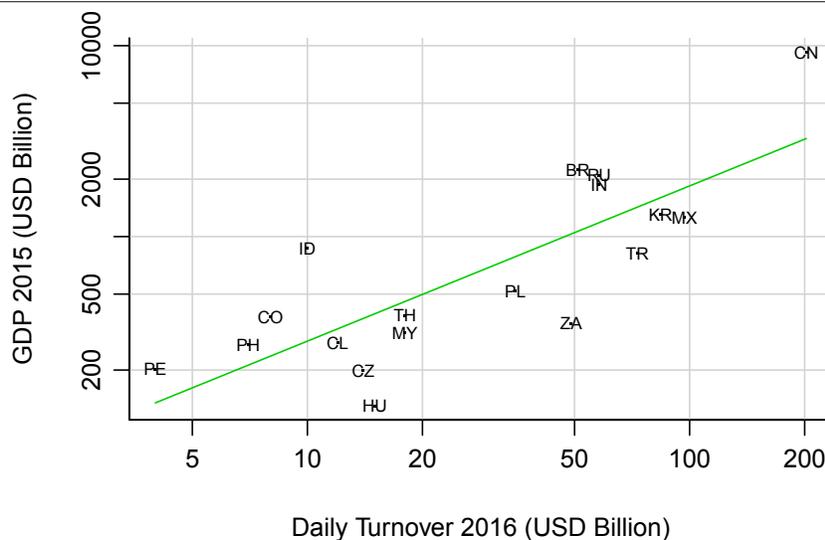
India's turnover in the NDF market was reported to be at 16.5 billion USD in 2016, up 16.7% from 2013 in FX adjusted terms (BIS, 2016). The INR/USD NDF instrument trades exclusively in offshore markets, forming approximately 60% of all turnover in INR offshore markets. Comparison with the onshore currency derivatives market's average daily turnover of USD 17 Billion underscores the growing demand for the Rupee abroad. The highly liquid offshore NDF market is a symptom of growing international interest in a currency that is not fully convertible. Cut-off from access to the domestic INR markets,

participants compensate for their forex risk by trading heavily in the offshore NDF markets. Historical empirical evidence seems to suggest that the onshore-offshore forward premium gap for the INR was always lower than the RMB (Hutchison *et al.*, 2012), suggesting greater financial integration in INR markets as compared to the RMB (Ma and McCauley, 2013). This may be changing as China internationalises the RMB and allows for greater participation of non-residents in an offshore deliverable forward (CNH) market (McCauley and Shu, 2016).

3.2 What determines forex market turnover?

Forex market turnover is a function of EM fundamentals like size of the economy, share in global trade, financial depth and capital account openness (Eichengreen and Kawai, 2015). He and Yu (2016) find that share of a country in world trade has a clear positive effect on the turnover of its currency in FX markets, but the effect of capital flows appears insignificant. They also find that share of currency trade is significantly associated with the financial depth measured by size of stock market size to GDP. He and Yu (2016) take the full sample of BIS reporting currencies while conducting their analysis. We restrict our sample to the 19 largest EMs⁷ in the BIS reporting group and look at correlations between FX market size and various fundamentals. This exercise pins down which fundamentals are important for growth in EM forex market turnover. Moreover, it helps us evaluate whether FX market turnover is higher or lower compared to the level predicted by the country’s fundamentals.

Figure 3 Drivers of FX market turnover in EM currencies: GDP



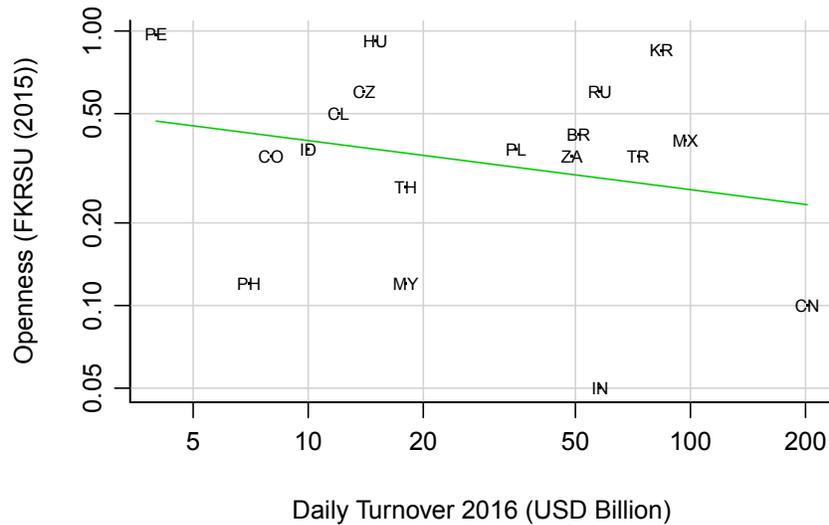
Source: BIS triennial survey (2016), Table D11.3, WDI

Figure 3 shows the relationship between level of real GDP and forex market turnover. The

⁷Refer to Section 6 for the list of countries

correlation between these two variables is positive and significant. By this metric, INR, BRL, RUB and RMB have smaller forex market turnover than predicted by their GDP level. We look at the relationship between level of capital account openness as proxied by the [Fernandez et al. \(2015\)](#) measure and forex market turnover in Figure 4. The [Fernandez et al. \(2015\)](#) measure is rescaled from 0 to 1 with zero meaning a completely closed capital account and one meaning a completely open capital account. The correlation between forex market turnover and capital account openness is negative and insignificant. This is primarily because INR and RMB are large EM currencies who are significant in spite of being fairly closed capital account economies. The negative and insignificant correlation is opposite to what is predicted by the literature.

Figure 4 Drivers of FX market turnover in EM currencies: Openness



Source: BIS triennial survey (2016), Table D11.3, FKRSU (2015)

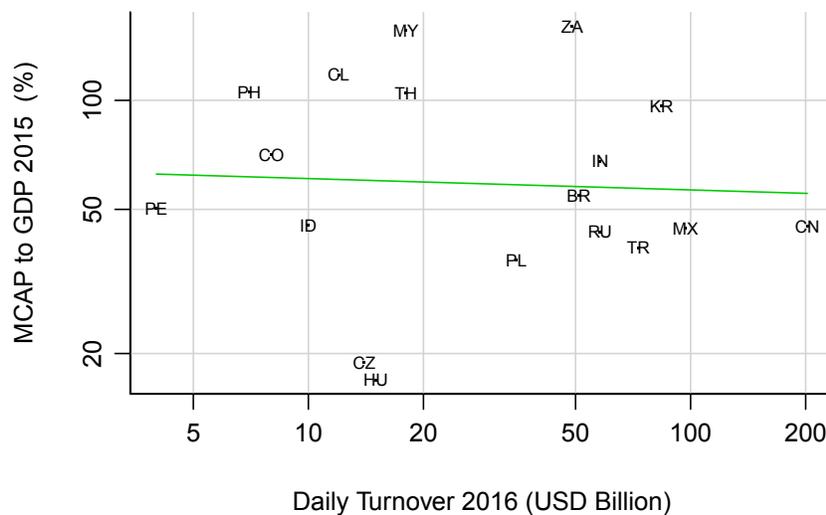
Figure 5 Drivers of FX market turnover in EM currencies: Trade turnover



Source: BIS triennial survey (2016), Table D11.3, WDI

Figure 5 evaluates the relationship between volume of trade proxied by the value of imports and exports from the WDI and forex market turnover. The relationship between these variables is positive and significant. By this metric, the BRL and ZAR have larger forex market sizes as predicted by their volume of trade whereas the INR, RUB and RMB have smaller forex markets. We finally evaluate the relationship between financial depth as proxied by market capitalisation to GDP to forex market turnover in Figure 6. We find a negative and insignificant correlation between these two variables, similar to capital account openness.

Figure 6 Drivers of FX market turnover in EM currencies: Size of financial market



Source: BIS triennial survey (2016), Table D11.3, WDI

This parsimonious correlation exercise tells us that level of GDP and volume of trade are the most important fundamentals driving EM forex market turnover. This is a little different to advanced countries where financial depth and capital account openness are significant factors determining forex market turnover. This is most likely due to the fact that a majority of EM currency demand comes through current account linkages rather than financial account linkages given the presence of capital controls in large EMs. The presence of capital controls seems to dampen currency demand in the case of INR and RMB, as forex market turnover is lower than what is predicted by level of GDP and volume of trade. This also indicates that these currencies have additional room to grow as international currencies once there is greater capital account liberalisation (Ma and Villar, 2014).

4 Role of INR as international currency

4.1 Official sector

Table 5 Allocation of foreign currency reserves: COFER, IMF (2016)

| Currency | 2016 Q2 |
|------------------------------|---------|
| Claims in U.S. dollars | 63.4 |
| Claims in Euros | 20.2 |
| Claims in Pounds sterling | 4.7 |
| Claims in Japanese yen | 4.5 |
| Claims in Canadian dollars | 2 |
| Claims in Australian dollars | 1.9 |
| Claims in Swiss francs | 0.3 |
| Claims in Other currencies | 3 |

We switch gears and evaluate the internationalisation of the Rupee in terms of its roles as an international currency in the tradition of Chinn and Frankel (2008) and Ito (2016)⁸. We first look at the role of the INR as an international currency in the official sector. The IMF collects information regarding a country's composition of foreign currency reserves via the Special Data Dissemination Standard (SDDS) and this data is released in aggregate terms as Currency Composition of Official Foreign Exchange Reserves (COFER). COFER gives us a sense of countries' foreign currency asset holding. Table 5 shows the currency composition of reserves as of Q2 2016. We can see that around 93% of all forex reserves are denominated in the "big-four" currencies. The BRICS currencies are part of claims in other currencies which at best amount to 3% of global reserve holding. As part of the inclusion of the RMB in the Standard Drawing Rights (SDR), COFER will report breakdown of RMB reserves from April 2017.⁹

⁸See Table 1

⁹Refer to <http://www.imf.org/en/News/Articles/2015/09/14/01/49/pr1690> or <https://www.imf.org/external/np/pp/eng/2016/021816.pdf>

To supplement the COFER, the IMF conducted an ad-hoc survey of 130 member countries on their holding of currencies in official foreign currency assets (IMF, 2015). The country level information was classified but the IMF released summary information regarding the global distribution of reserve assets along with their associated magnitudes. Figure 7 shows that 6 countries claimed that they use INR in their official sector assets as of 2014. Only the BRL has lower reserve asset penetration than the INR. There is a clear difference between the RMB and the BRIS currencies. BRIS countries are used as reserve currencies in their economic area of influence whereas the RMB had much wider usage in reserve assets.

Figure 7 Role of INR in international reserves, Distribution

Survey on the Holdings of Currencies in Official Foreign Currency Assets ^{1/}
 Table 1: Number of Countries/Jurisdictions Reporting Assets by Currency

| | 2013 | 2014 |
|-------------------------|------|------|
| Total Currency Holdings | 130 | 130 |
| U.S. dollar | 127 | 127 |
| Pound sterling | 108 | 109 |
| Euro | 109 | 108 |
| Japanese yen | 87 | 88 |
| Canadian dollar | 84 | 85 |
| Australian dollar | 79 | 78 |
| Swiss franc | 73 | 69 |
| Swedish krona | 45 | 48 |
| Norwegian krone | 45 | 40 |
| Chinese renminbi | 27 | 38 |
| New Zealand dollar | 27 | 29 |
| Singapore dollar | 16 | 18 |
| South African rand | 11 | 12 |
| Russian ruble | 5 | 8 |
| Indian rupee | 4 | 6 |
| Brazilian real | 5 | 5 |
| Other currencies | 81 | 80 |

^{1/} One country provided partial data.

Source: IMF (2015)

Figure 8 Role of INR in international reserves, Magnitude

Survey on the Holdings of Currencies in Official Foreign Currency Assets ^{1/}
 Table 3: Official Foreign Currency Assets by Currency
 Millions of U.S. Dollars - End of Period

| | 2013 | | 2014 | |
|-------------------------------------|---------------------|------------------|---------------------|------------------|
| | Amount | Percent of Total | Amount | Percent of Total |
| Total Holdings in Currencies | 6,779,830.42 | 100.00 | 6,738,534.06 | 100.00 |
| SDR Basket Currencies | 6,276,718.91 | 92.58 | 6,214,838.24 | 92.23 |
| U.S. dollar | 4,158,921.34 | 61.34 | 4,290,575.54 | 63.67 |
| Euro | 1,603,466.98 | 23.65 | 1,417,328.09 | 21.03 |
| Pound sterling | 287,966.45 | 4.25 | 274,564.80 | 4.07 |
| Japanese yen | 226,364.14 | 3.34 | 232,369.81 | 3.45 |
| Non-SDR Basket Currencies | 503,111.51 | 7.42 | 523,695.81 | 7.77 |
| Australian dollar | 151,026.62 | 2.23 | 142,451.37 | 2.11 |
| Canadian dollar | 133,863.09 | 1.97 | 133,869.60 | 1.99 |
| Chinese renminbi | 45,358.87 | 0.67 | 74,611.87 | 1.11 |
| Swiss franc | 16,077.82 | 0.24 | 15,365.62 | 0.23 |
| New Zealand dollar | 16,805.46 | 0.25 | 15,213.97 | 0.23 |
| Swedish krona | 13,819.59 | 0.20 | 13,224.57 | 0.20 |
| Norwegian krone | 13,956.93 | 0.21 | 12,050.16 | 0.18 |
| Singapore dollar | 4,388.19 | 0.06 | 3,912.38 | 0.06 |
| Brazilian real | 3,416.08 | 0.05 | 3,335.65 | 0.05 |
| South African rand | 2,687.69 | 0.04 | 3,140.54 | 0.05 |
| Indian rupee | 459.23 | 0.01 | 1,000.11 | 0.01 |
| Russian ruble | 360.81 | 0.01 | 355.97 | 0.01 |
| Other currencies | 100,891.13 | 1.49 | 105,164.00 | 1.56 |

^{1/} One country provided partial data.

Source: IMF (2015)

Figure 8 shows the magnitude of reserve assets holding in various currencies. By this metric the INR is ranked second last amongst all major currencies. The volume of INR held as reserve assets has increased from 2013 to 2014 to around a billion dollars. There is some anecdotal evidence in some pockets of the economy that Indian rupee is accepted in Singapore, Malaysia, Indonesia, Hong Kong, Sri Lanka and the UK. The Central Bank of Nepal, Nepal Rastra Bank, also holds Government of India Treasury Bills (Ranjan 2010). The INR is also a historical outlier, given the fact that INR was legal tender in Qatar, Bahrain, UAE, Kuwait, Oman and Malaysia till the mid 1960s (Ranjan and Prakash, 2010).

Another mode of official sector currency internationalisation goes through bilateral swap lines. After the GFC, use of swap lines between central banks has become a popular mode for sharing dollar funding (liquidity) risk as well as currency internationalisation. The People's Bank of China (PBoC) has had tremendous success internationalising the RMB through bilateral swap lines (Garcia-Herrero and Xia, 2013). The RBI unlike the PBoC has utilised the swap line channel to mitigate dollar funding risks rather than build bilateral ties to internationalise the Rupee. The RBI has entered into four swap line agreements, out of which 3 are active.

Table 6 RBI swap lines

| Counterparty | Last renewal | Size | Objective |
|--|-------------------|----------------|---|
| Bank of Japan (inactive) | 2014-01-01 | USD 50 Billion | Mitigation of Dollar funding risk |
| SAARC countries | 2016-02-01 | USD 2 Billion | Mitigation of Dollar funding risk |
| Central Bank of UAE | 2016-02-01 | ?? | Bilateral swap line, management of INR-AED mismatch |
| BRICS (Contingent Reserve arrangement) | 2015-07-01 | USD 18 Billion | Mitigation of Dollar funding risk |

Table 6 shows bilateral swap arrangements entered into by the RBI. Out of the 4 swap lines, the swap line with the Central bank of UAE is the only one denominated in local currency.¹⁰ All the other swap lines have a dollar transaction leg. Table 7 summarises the roles of the INR as a currency in the official sector and we can see that it has a negligible role as an international currency.

Table 7 Roles of an INR as an official sector currency

| Function of money | Governments | Private actors |
|--------------------|---|---|
| Store of value | International Reserves Negligible | Currency substitution and investment |
| Medium of exchange | Vehicle currency for FX intervention None | Invoicing trade and financial transactions |
| Unit of account | Anchor for local currency pegging None | Denominating trade and financial transactions |

4.2 Use of INR by private actors

4.2.1 Currency substitution and investment

India has a liberalised framework for foreign portfolio investment since the notification of the Foreign Institutional Investor (FII) framework¹¹ in 1995. The Indian securities regulator, Securities and Exchange Board of India (SEBI) liberalised the foreign investment framework recently in July 2014.¹² Over 1000 new foreign investors registered with SEBI

¹⁰Refer to https://www.rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=36229

¹¹Refer to <http://www.sebi.gov.in/acts/fiiregu2009.pdf>, last accessed on on Jan 17th, 2017

¹²Refer to http://www.sebi.gov.in/cms/sebi_data/attachdocs/1389083605384.pdf, last accessed on on Jan 17th, 2017

during the period June 2014 to August 2015, marking a 12% increase in the number of investors registered with SEBI. On average, 19-20% of Indian equities are held by foreign investors.¹³ Foreign portfolio investment (FPI) in debt is subject to limits, There is total cap of USD 84 Billion for FPI-debt with a sub limit of USD 33 Billion for sovereign debt and USD 51 billion for corporate debt. Prior to 2016, most of the FPI-debt limit for sovereign debt was fully utilised with some room in the corporate bond segment. Given the changing stance of global monetary policy, there was a selloff in EM bonds and current utilisation of the FPI-debt is below the notified limit for both sovereign and corporate segment.¹⁴ The INR is actively used for currency substitution and investment.

4.2.2 Rupee-denominated bonds

Liberalisation of the external commercial borrowings (ECB) framework in 2015¹⁵ and 2016 allowed Indian corporates to issue INR denominated bonds overseas. These bonds are commonly referred to as “Masala bonds”. The rupee denominated bond is an attempt to shield issuers from currency risk and instead transfer the risk to investors buying these bonds. The currency risk is borne by the investor and hence, during repayment of bond coupon and maturity amount, if rupee depreciates, RBI will realize a marginal saving. Many commentators have pointed out the issuance of Rupee denominated bonds overseas is a major step in internationalising the INR. As of November 2016, there are 13 active masala bonds listed in LSE, raising \approx USD 2 billion. Out of these 13 bonds, 10 masala bonds have been raised by multilateral organisations and remaining 3 by Indian corporates. Both multilateral organisations and corporates have raised a billion dollars each (LSE, 2016). However, Masala bonds have had low uptake by foreign investors when compared to Dimsum bonds (USD 50 billion outstanding). The uptake of Masala bonds is also low as a percentage outstanding international debt securities issued by Indian national entities (Table 8).

Table 8 Offshore Local currency (LCY) to Foreign currency (FCY) debt, by nationality

| Country | Offshore bonds (USD Billion) | LC (USD Billion) | International Debt securities (USD Billion) | Per cent |
|---------|------------------------------|------------------|---|----------|
| India | 2 | | 86 | 2.3 |
| China | 50 | | 565 | 8.8 |

Source: BIS 2016, Author's calculations

¹³Market capitalisation of Indian equities: USD 1.5 trillion, FPI-Equity: \approx USD 300 Billion

¹⁴Refer to <https://www.fpi.nsdl.co.in/Reports/ReportDetail.aspx?RepID=1> for the latest number; last accessed on 23rd December, 2017

¹⁵Refer to <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10049>, last accessed on Jan 17th, 2017

4.2.3 Invoicing and settlement of trade in INR

Currency invoicing in trade is an important first step for any national currency to become an international currency. Local currency (LCY) invoicing of trade in the Rupee is less than 2.5% of total trade as of the last release of currency invoicing data by the RBI¹⁶ in 2014. Most of the trade invoicing in India goes through USD and EUR.

Table 9 Invoicing of exports

| Currency | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|----------------------|---------|---------|---------|---------|---------|
| Pounds Sterling | 2.77 | 2.81 | 2.47 | 2.31 | 2.31 |
| US Dollar | 84.06 | 84.75 | 86.41 | 87.01 | 88.41 |
| Japanese Yen | 0.48 | 0.35 | 0.22 | 0.26 | 0.15 |
| Euro | 10.85 | 10.13 | 8.88 | 8.14 | 6.97 |
| All other Currencies | 1.84 | 1.96 | 2.02 | 2.28 | 2.16 |

Source: RBI

Table 10 Invoicing of imports

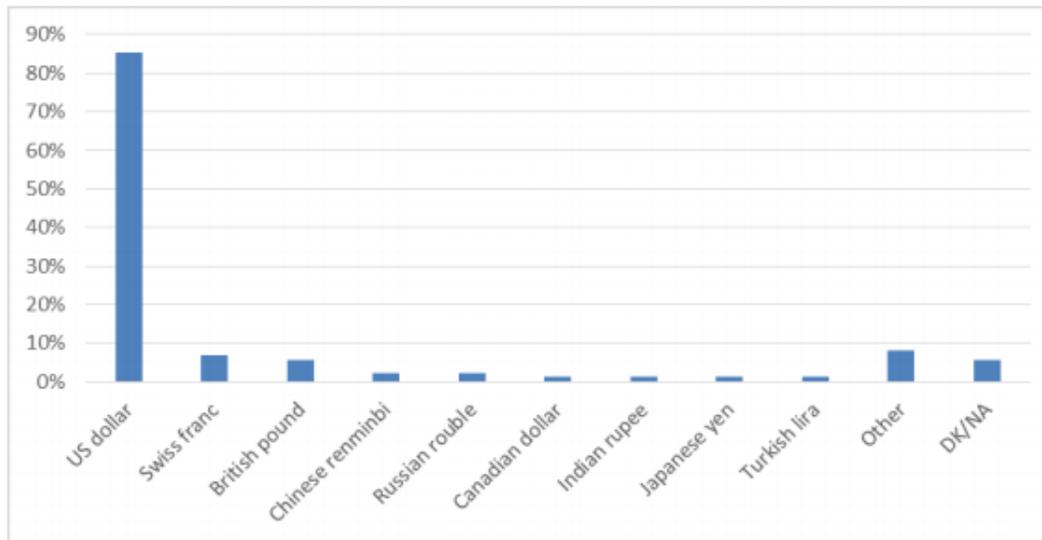
| Currency | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 |
|----------------------|---------|---------|---------|---------|---------|
| Pounds Sterling | 0.89 | 0.66 | 0.71 | 0.5 | 0.42 |
| US Dollar | 86.06 | 83.91 | 85.38 | 88.67 | 86.06 |
| Japanese Yen | 2.3 | 1.98 | 1.73 | 1.41 | 1.47 |
| Euro | 9.82 | 12.61 | 11.13 | 8.29 | 9.44 |
| All other Currencies | 0.93 | 0.84 | 1.05 | 1.13 | 2.61 |

Source: RBI

This structure of invoicing is a reflection of the transaction costs faced by external trade partners and local traders in invoicing trade in local currency. Around 22% of all Chinese trade is now settled using the RMB,¹⁷ which is down from a high of 26% prior to the RMB's devaluation.

¹⁶Refer to https://rbi.org.in/Scripts/BS_PressReleaseDisplay.aspx?prid=31788, last accessed on Jan 17th, 2017

¹⁷Refer to <https://www.ft.com/content/e480fd92-bc6a-11e6-8b45-b8b81dd5d080>, Last accessed on 23rd Dec, 2016

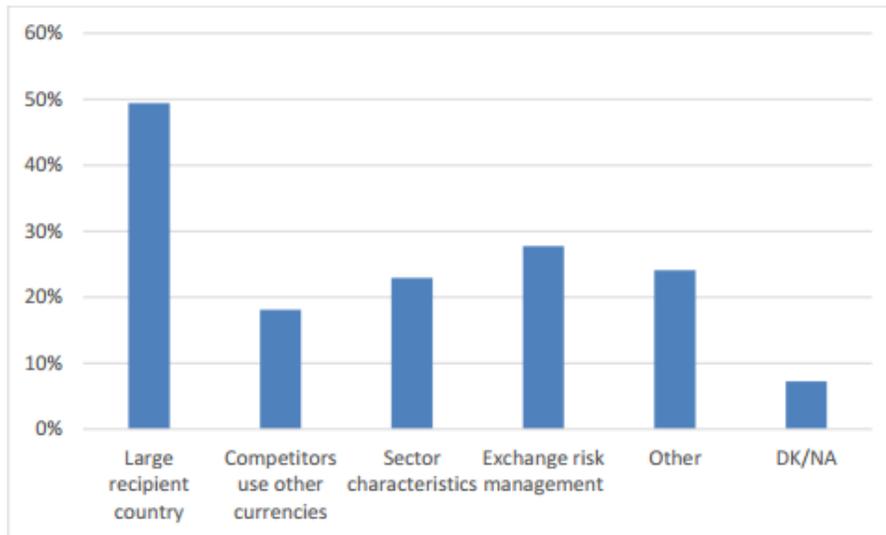
Figure 9 Indirect evidence of Rupee invoicing**Figure 4.3** Currencies other than the euro used for exports invoicing.

Source: TNS and authors calculations

Note: Number of companies is 88. Multiple answers could be provided. DK/NA denotes "Don't know / No answer".

Source: *EC survey on invoice currency, 2016*

Goldberg and Tille (2008) and Ito and Chinn (2014) argue that hedging costs are a primary driver after “size” of a country in explaining local currency use in invoicing. This assertion is backed by recent survey evidence from European traders (Langedijk *et al.*, 2016). The survey finds that only a small number of firms invoice in currencies (Figure 9) outside the “big four” and the levels of local currency invoicing of trade in RMB and INR are similar for European firms. Moreover, hedging costs are the primary determinants of local currency use after size of recipient country (See Figure 10).

Figure 10 What are the factors driving utilisation of LCY in invoicing?**Figure 4.4:** Factors affecting the choice of currencies other than the euro for export invoicing

Source: TNS and authors calculations

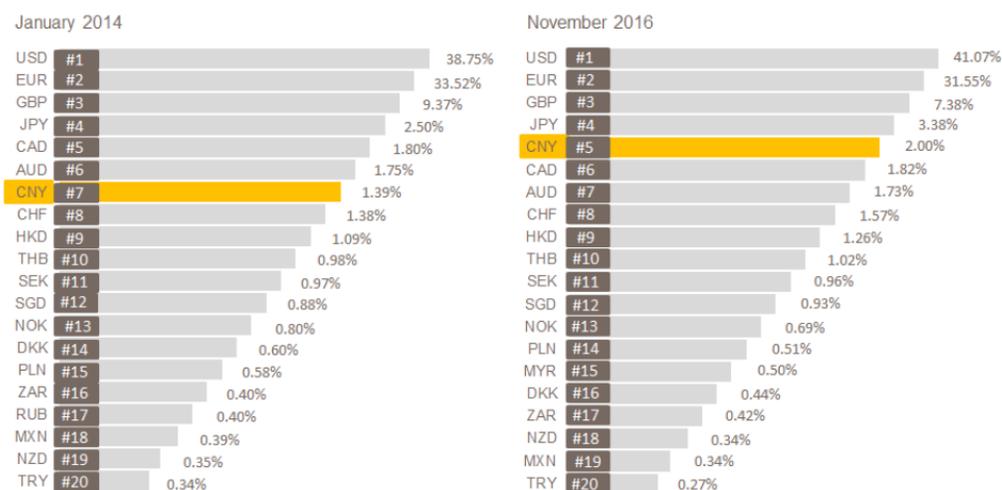
Note: Number of companies is 83. Multiple answers could be provided. DK/NA denotes "Don't know /No answer".

Source: EC survey on invoice currency, 2016

The Indian government has promoted bilateral invoicing and settlement in local currencies since 2012¹⁸ in order to facilitate deeper current account linkages between trading partners. The key features of this proposed facility were as follows:

- To provide the facility to settle payments in home currency, on a bilateral basis, for current account transactions settlement between India and the trading partner countries;
- To promote the use of participants' currencies in current account transactions between their respective countries;
- To promote co-operation among the participants and closer relations among the banking systems in the two countries, and thereby, contribute to the expansion of trade and economic activity between the two countries;
- The exporters / sellers of each country shall denominate the export contracts and invoices in their home currency thereby eliminating exchange-risk and resultantly, may discover competitive pricing.

¹⁸MoF note F.No.20/15/2012-BO.II, RBI Master Circular No. 14/2012-13, Refer to <http://financialservices.gov.in/banking/circulars/2012/INR%20Local%20Currency%20Settlement%20Mechanism.pdf>, last accessed on on Jan 17th, 2017

Figure 11 Top 20 settlement currencies


Source: SWIFT (2016)

In spite of this facility being proposed in 2012, it has not been notified by the RBI. As of the writing of this paper, only **Bhutan and Nepal** have access to direct invoicing and settlement of their trade in Rupees. For all other countries, as per the last notification issued by the RBI,¹⁹ trade from and to India may be invoiced in “freely convertible currencies” or Rupees. Amongst the BRICS currencies, only the South African Rand (ZAR) is considered a freely convertible currency by the RBI. This limits the invoicing and settlement possibilities of trade partners who do not have freely convertible currencies. Bilateral trade deals provide a work-around and allow for limited local currency settlement. There are active bilateral arrangements with Iran²⁰ and Russia. President Putin and Prime Minister Modi announced a push towards bilateral settlements in the Ruble and Rupee during President Putin’s visit in December 2014. After initial excitement surrounding this arrangement limited bilateral banking presence, small volume of trade between both countries, limitations in availability of hedging instruments and continued depreciation of the INR/RUB currency pair against the Dollar²¹ have effectively put a stop to bilateral settlement.²²

According to (non-publically available data) SWIFT,²³ in Apr 2016 80% of trade to India

¹⁹Refer to Notification FEMA 14(R)/2016-RB, <https://goo.gl/WAjL9G>, Last accessed on 17th January 2017

²⁰This is an artefact of membership in the Asian Clearing Union (ACU) and is also related to the economic sanctions Iran faced until 2016. As of 2016, after sanctions on Iran have been lifted, the future of bilateral settlement in Rupees is uncertain. Indian firms have accrued large payment obligations to Iranian firms, prompting Iran to demand settlement of these debts in Euros instead of Rupees. Source:<https://goo.gl/VtmmXU>, Accessed on January 17, 2017

²¹Refer to <https://goo.gl/ZkAfCJ>, Last accessed on January 17th, 2017

²²Given evolving global macroeconomic conditions and expectations of Dollar appreciation, India’s foreign trade policy for 2015-2020 does not mention any explicit incentive for LCY invoicing and settlement. MoF note F.No.20/15/2012-BO.II was proposed at a time when the Rupee was relatively stronger compared to the current macroeconomic situation. Refer to <http://dgft.gov.in/exim/2000/ftp2015-20E.pdf>

²³Refer to <https://goo.gl/bazUrF>, Last accessed on Dec 23, 2016

was settled in USD. This followed by 7.2% in INR, 6.3% in EUR with the remaining 6.5% split over all other currencies. This percentage share indicates approximately USD 50-70 Billion of trade settled in Rupees. However, the INR does not make the top 20 international settlement currency list (See Figure 11) indicating that there is a great potential in improving settlement of trade using the INR.

The INR is more actively used by private actors than the official sector. The bulk of INR's international utilisation comes from the usage of INR in currency substitution and investment activity by private actors. Table 11 summarises INR's role as international currency across both official and private sectors and we can see that it has a negligible role as an international currency.

Table 11 Roles of INR as an international currency

| Function of money | Governments | Private actors |
|--------------------|--|---|
| Store of value | International Reserves Negligible | Currency substitution and investment FPI framework |
| Medium of exchange | Vehicle currency for FX intervention None | Invoicing trade and financial transactions Negligible |
| Unit of account | Anchor for local currency pegging None | Denominating trade and financial transactions Negligible |

Figure 12 shows the roles of the RMB as an international currency. China's policy push to internationalise the RMB has been relatively successful and utilisation of the RMB in global transactions is similar in magnitude to the Swiss Franc (CHF). Given that India and China are in the same geographical vicinity, the rise of the RMB increases local competition for regionalising the INR and makes it difficult to use regional agreements as a pathway for internationalisation.

Figure 12 Role of RMB as an international currency

| Dimensions of an International Currency | | |
|---|---|--|
| | Private Sector | Official Sector |
| Unit of account | Trade invoicing <RMB trade invoicing> | Being pegged by other countries <China. None> |
| | Denomination of financial products issued by companies and financial institutions of other countries <China. Panda bonds> | High weights in (official or de facto) currency baskets of foreign central banks <China. Frankel-Wei regression> |
| | Denomination of offshore financial products by domestic companies <China. Dim Sum bond> | (IMF) SDR composition currency <China. Oct. 2016> |
| Medium of exchange (Settlement) | Trade settlement <China. RMB trade settlement> | Intervention currency by other monetary authorities |
| | International financial transaction settlement <China. SWIFT> <China. BIS Triennial Survey> | Government financial transactions (such as ODA) |
| | | Central Bank swaps currency <China. PBOC Swap lines> |
| Store of value | Cross-border deposits <China. RMB deposits offshore> | Foreign reserves (of other countries) <China. IMF COFER; & Special Survey> |
| | Cross-border securities investment | Sovereign Wealth Funds (of other countries) |

Source: Author's creation, slightly modified from Ito (2011), which was based on the matrix first proposed by Kenen (1983) and Cohen (1971).

Source: Ito (2016)

5 Looking ahead

“Internationalization of Rupee will facilitate greater degree of integration of Indian economy with rest of the world in terms of foreign trade and international capital flows. Key benefits of internationalization of Rupee include savings on foreign exchange transactions for Indian residents, reduced foreign exchange exposure for Indian corporate, reduction in dependence on foreign exchange reserves for balance of payment stability etc. One of the important drivers for internationalization of a currency is the country's share in global merchandise and commercial services trade. India's percentage share in the global trade is still on the lower side and it limits the pricing ability of domestic businesses in Indian Rupee. Moreover, the share of Indian Rupee in the Global foreign exchange market turnover at present is also very low. Internationalization of Indian currency would also require full capital account convertibility. As a policy, we have followed a gradual and cautious approach in opening up the capital account. The capital account is being progressively liberalized in accordance with the evolving macro-economic conditions and requirements of the Indian industries, individuals and financial sectors.”

Written reply by Jayant Sinha, Minister of State in the Ministry of Finance, Lok Sabha, May 6th, 2016

Governor Raghuram Rajan while addressing reporters regarding the inclusion of the RMB as a SDR currency stated that there would be no “big bang” measures to internationalise the INR. It is more likely that Indian policymakers will choose a gradual move towards internationalisation in the medium term. As of writing this paper India only satisfies the size of GDP and political stability pre-conditions for currency internationalisation.

Restrictions on currency convertibility, both on the current and capital account hamper growth of INR as a global currency. The framework for exchange controls in India comes

from the Foreign Exchange Management Act (FEMA), which was passed in December 1999 and enacted in 2000. FEMA categorises transactions into current account and capital account transactions and has specific rules and restrictions for across classes of individuals and investors; based on residence, size of transaction, instruments used, tenor of instrument and vehicle currency. For the purposes of India's ascension to the WTO, the Rupee is a fully convertible currency on the current account. However, as we described in the previous section, simple transactions like realization of payments for exports and imports cannot be in Rupees unless its specifically approved. Current account transactions exceeding \$ 250,000 for individuals²⁴ require RBI approval. Rupee accounts cannot be held abroad²⁵ and therefore overseas cash settlement in Rupee is not currently possible. Table 14 lists out limits for "general permission" or "unrestricted" current account transactions. This is ignoring the approval route transactions which need prior Government/RBI approval and prohibited transactions which are not allowed.²⁶ The documentary requirements along with delays in approvals disincentivise both residents and non-residents from using the Rupee for current account transactions.

As far as the capital account is concerned there is a large framework of controls split by residency, instrument, transaction size and investor category. The power to regulate capital account transactions currently vests with the RBI. This power has been conferred on it by Section 6(3)(b) of FEMA. A general overview of the framework is as follows (Patnaik and Shah, 2012; Sengupta, 2016):

Outward flows by firms : Outbound FDI by a firm is capped at a multiple of its net worth

Foreign Banks : RBI restricts the growth of foreign banks by permitting all foreign banks, put together, to open 20 branches a year

Foreign borrowing by firms : Maturity of loan, amount, interest rate, end-use and the sector to which the debtor firm belongs, are prescribed. The aggregate borrowing by all firms in a year is subject to a ceiling.

Debt investment by foreign portfolio investors : The aggregate investment by all foreign investors is subject to one ceiling for government bonds, and another for corporate bonds

Equity investments by foreign portfolio investors : Only registered "foreign portfolio investors" are permitted to buy shares in India. Their investments are subject to sectoral and firm level ceilings

FDI : Foreign ownership in certain sectors (e.g. telecom, insurance, banking) is capped at various levels

²⁴Refer to <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=10192&Mode=0>

²⁵Rupee Drawing arrangements (RDA) exist with Gulf countries, Hong Kong, Singapore, Malaysia and other FATF compliant countries. These accounts can be used for channeling cross-border inward remittances into India primarily on private account upto Rs. 1,500,000 per transaction. These accounts cannot be used for trade settlement, even though in theory they may be utilised to do so. Refer to https://www.rbi.org.in/Scripts/BS_ViewMasDirections.aspx?id=10205

²⁶Refer to <https://goo.gl/Lf5uSu> for full list of prior-approval based (Schedule II) and prohibited (Schedule I) transactions

The FEMA reform process in terms of both current and capital account transactions has tended to drift towards greater openness. Current account outflow restrictions on individuals have been eased in 4 incremental steps²⁷ between 2004-2015 with the limits being increased from \$ 25,000 to \$ 250,000 over the 11 year period.²⁸ In terms of foreign portfolio investment, India moved to a unified portfolio investment (FPI) framework for institutional investors, non resident individuals and venture capital funds in 2014.²⁹ Recent developments in the FPI framework for investment in Rupee denominated bonds and the external commercial borrowing (ECB) framework for foreign borrowing by firms gives us some insight about the current state of the capital account reform process.

When we evaluate the evolution of the foreign investment limits in Rupee denominated debt, we find that the limit enhancement³⁰ has been non-linear. There was a 10 times enhancement in combined limit for investment in Rupee denominated bonds between 2008-2014 (Table 12) over 9 incremental liberalisations. This process was ad-hoc and was usually driven by indirect exchange rate management concerns given that most liberalisations took place around months of heavy exchange rate stress and increase in interest rates (Pandey *et al.*, 2016).

Table 12 Foreign investment limits in Rupee denominated debt (USD Billion)

| Date | Government Securities | Corporate Bonds | Total |
|--------|-----------------------|-----------------|-------|
| Jun 08 | 5 | 3 | 8 |
| Oct 08 | 5 | 6 | 11 |
| Feb 09 | 5 | 15 | 20 |
| Nov 10 | 10 | 20 | 30 |
| Mar 11 | 10 | 40 | 50 |
| Aug 11 | 10 | 40 | 50 |
| Nov 11 | 15 | 45 | 60 |
| Jun 12 | 20 | 45 | 65 |
| Apr 13 | 25 | 51 | 76 |
| Jun 14 | 30 | 51 | 81 |

The introduction of the FPI³¹ framework marked a structural change in regulation of inward portfolio flows. This allowed for rationalisation of documentary requirements, merging of investor categories, clarifications on tax treatment and a reduction in processing time for foreign investor registration.³² This was followed a year later by announcement of a medium term framework (MTF)³³ for investment in onshore Rupee denominated govern-

²⁷These limits were partially reversed during the taper tantrum

²⁸Refer to <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=10192&Mode=00>

²⁹Refer to http://www.sebi.gov.in/cms/sebi_data/attachdocs/1467282054952.pdf

³⁰Refer to <https://goo.gl/rnx8R3> for a history of limits till 2012. Refer to <https://goo.gl/lz1Vuf> for a specific study on foreign investment in Rupee denominated government securities

³¹Refer to http://www.sebi.gov.in/cms/sebi_data/attachdocs/1389083605384.pdf, last accessed on Jan 17th, 2017

³²Refer to <https://goo.gl/tnmWQY>, Last accessed on Jan 17, 2017

³³Refer to <https://www.rbi.org.in/scripts/NotificationUser.aspx?Id=10059&Mode=0>, Last accessed on 17th Jan, 2017

ment securities. The key announcement was that limits for FPI investment in the Central Government securities³⁴ will be increased in phases to reach 5 per cent of the outstanding stock by March 2018 along with limit enhancements announced every March and September. This announcement along with the introduction of the FPI framework was made to provide foreign investors a more predictable investment regime in Rupee denominated assets. This marks the first instance of the RBI committing to a glide-path or a medium term plan for capital account liberalisation similar to PBoC's announcements regarding the Renminbi. The ECB framework also saw large scale changes in 2015 with the introduction of offshore Rupee trade credit³⁵ and offshore Rupee denominated bonds³⁶ in September. These changes are an integral part of internationalising the Rupee and allow for deepening of Rupee liquidity in offshore centres. This was followed by a rationalisation of the ECB framework in November 2015³⁷ with the introduction of a unified framework for Rupee denominated debt for Indian firms encompassing both onshore and offshore issuances, across a range of instruments including trade credit, loans and bonds. Around one-fifth of Indian corporate financing needs are met by foreign currency borrowing. Almost all trade credit is denominated in foreign currency. Permitting international banks and capital markets to raise Rupee debt marks a small but important step in solving the problem of "original sin" faced by firms and the government (Hausmann and Panizza, 2003).

In this context, it is important to highlight the role of hedging markets. The presence of hedging markets allows for internationalisation of a currency as both a vehicle for invoicing trade as well as financial portfolio diversification. The RMB losing market share as an invoicing currency after its devaluation in August 2015, reflects the realities of currency internationalisation without provision of an adequate risk management infrastructure.

In India's case, exchange traded currency derivatives were introduced in 2008 but foreigners were not allowed to participate on exchanges till June 2014. Their participation is limited by detailed documentation requirements to show a "demonstratable" exposure along with margin requirements and position limits on exchanges. This problem is accentuated by restrictions on types of products, lack of overlap between Indian trading hours and global trading times and regulatory risk. There are similar restrictions in OTC markets as well and this pushes market participants to access offshore NDF markets.³⁸

The existence of such large NDF markets for the INR should be of concern for domestic policymakers. IGIDR Finance Research Group (2016) estimates that based on the trade volumes in these markets, Indian financial firms are potentially losing out on revenues worth USD 500 billion annually. Additionally, segmentation of foreign exchange markets makes it difficult for the central bank and market regulators to effectively manage the

³⁴ Additionally, a separate limit for investment by all FPIs in the State Development Loans (SDLs) was also announced, to be increased in phases to reach 2 per cent of the outstanding stock by March 2018.

³⁵ Refer to <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10023&Mode=0>, Last accessed on 17th Jan, 2017

³⁶ Refer to <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10049&Mode=0>, Last accessed on 17th Jan, 2017

³⁷ Track III in the revised ECB framework, Refer to <https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=10153&Mode=0>, Last accessed on Jan 17th, 2017

³⁸ Refer to Standing Council on International Competitiveness of the Indian Financial System (2015) for a detailed discussion

exchange rate stress. During the “taper tantrum” episode of 2013, market participants primarily transacted in offshore NDF markets for their risk management needs, given the restrictions in onshore markets (Tayal, 2013). Divergence of rates in offshore NDF markets and the onshore currency markets can be frequently observed in the Indian case (Hutchison *et al.*, 2012). This may have negative spillover effects on domestic rates and price discovery if onshore liquidity becomes tight, as was the case during May-September 2013.

Dealing with offshore NDF markets will have implications on the development of onshore INR hedging markets. India can learn significantly from the experience of the China and Russia - Two BRICS countries which have charted divergent paths towards internationalisation of their currencies. The Ruble was made fully convertible in mid-2006. Subsequently, the offshore NDF markets for Ruble shifted to onshore currency markets. The Ruble NDF has the smallest share out of the BRICS currencies in the global NDF market. China on the other hand, chose a gradual approach using partnerships with global financial centres. Chinese authorities impose strict onshore capital controls but have permitted a pool of offshore Renminbi instruments that can be freely traded and delivered. Both these approaches have been useful in gaining domestic currency trading shares but the continued effectiveness of these approaches rests on unconstrained arbitrage between onshore and offshore rates (McCauley and Shu, 2016).³⁹

Increasing access to onshore hedging markets for foreigners and allowing access to offshore markets to residents is an easy first step towards improving INR currency risk management. Standing Council on International Competitiveness of the Indian Financial System (2015) and (IGIDR Finance Research Group, 2016) list out short term policy responses that can aid the competitiveness of onshore hedging markets like increasing position limits, reducing documentary burden and allowing domestic financial firms to participate in offshore NDF markets. Improvement in INR risk management is likely to increase the utilisation of the INR as a trade currency. The government can continue its policy efforts in promoting use of the INR as trade invoicing currency, especially for South-South trade and subsequently look at a gradual extension of offshore INR settlement (deposits) and trade credit. The RBI however, is taking a calibrated approach⁴⁰ to Rupee internationalisation and does not mention any changes in local currency invoicing and settlement for 2016-17; its policy focus is on slowly improving hedging markets and increasing use of INR as a currency for raising debt from foreign counterparties.

RBI’s reluctance to allow for LCY invoicing and settlement is based on practical considerations. First, India’s trade exposure to non-convertible currency based trade partners is less than 10% excluding China and oil producing countries. Second, there is a lack of risk management facilities in non/partially convertible currencies and there are associated risks in dealing with banks from these countries in “making” bilateral currency markets.⁴¹ This is unlikely to change soon given the reversals in capital account liberalisation in the emerg-

³⁹Sanctions and political uncertainty in Russia revived the Ruble NDF market whereas imposition of capital controls following the exchange rate depreciation of August 2015 in China quadrupled the volume of Renminbi NDF trading.

⁴⁰Refer to <https://www.rbi.org.in/scripts/AnnualReportPublications.aspx?Id=1178>, Last accessed on Jan 17th, 2017

⁴¹Refer to <https://goo.gl/EH13Iw>, Last accessed on January 17th, 2017

ing world after the taper tantrum in 2013 (Gallagher, 2014). The BRICS agenda needs to focus on decentralised risk management at firm level, both financial and non-financial, if it wants to move towards LCY settlement of trade amongst its member countries. Initiatives like the Contingent Reserve Arrangement (CRA) can also be leveraged to provide risk management support during times of global macroeconomic stress.

There is no consensus in India about capital account convertibility and it is difficult to judge whether India will follow the Russian or the Chinese model of currency internationalisation as there have been proposals for both greater capital account convertibility⁴² and financial centres similar to Hong Kong.⁴³ Indian policymakers demonstrated a preference for a mix of both strategies, liberalisation and setting up an international financial center, but there has been very little synergy between both efforts.⁴⁴

As of the writing of this paper the share of INR in global currency turnover is just 1% whereas India contributes almost 3% to global GDP. We anticipate a slow internationalisation of the INR, given the current path of exchange control and capital account liberalisation continues until 2019. Given China's experience with Hong Kong, an international financial centre in Gandhinagar is likely to accelerate the process of INR internationalisation and financial sector reform. The RBI will continue to remain cautious and is unlikely to shift from its "wait and watch" approach before committing to the next phase of INR internationalisation reforms. We do not expect any "big bang" changes before the next policy cycle begins in 2020. Given recent changes in regulatory frameworks, we expect a clear medium to long term plan articulated by the RBI in conjunction with the Ministry of Finance, if and when they decide to pursue Rupee internationalisation.

⁴²Refer to (Committee on Fuller Capital Account Convertibility, 2007)

⁴³Refer to <https://rbi.org.in/Scripts/NotificationUser.aspx?Id=9636&Mode=0> for notified legal framework

⁴⁴Refer to <https://goo.gl/drLCHq>, Last accessed on 17th January, 2017

References

- BIS (2010). “Triennial Central Bank Survey: Foreign exchange and derivatives market activity.” *Report*, Bank for International Settlements. URL <http://www.bis.org/publ/rpfx10.pdf>.
- BIS (2013). “Triennial Central Bank Survey: Foreign exchange and derivatives market activity.” *Report*, Bank for International Settlements. URL <http://www.bis.org/publ/rpfx13.pdf>.
- BIS (2016). “Triennial Central Bank Survey: Foreign exchange and derivatives market activity.” *Report*, Bank for International Settlements. URL <http://www.bis.org/publ/rpfx16.pdf>.
- Chinn M, Frankel J (2008). “Why the Euro Will Rival the Dollar.” *International Finance*, **11**(1), 49–73. URL <https://ideas.repec.org/a/bla/intfin/v11y2008i1p49-73.html>.
- Committee on Fuller Capital Account Convertibility (2007). “Report of the Committee on Fuller Capital Account Convertibility.” *Report*, Reserve Bank of India. URL <https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/72250.pdf>.
- Dixon C, *et al.* (2015). “The New BRICS Bank: Challenging the International Financial Order?” *Global Policy Institute policy paper*, (28), 1–13.
- Eichengreen B (2013). “Number One Country, Number One Currency? 1.” *The World Economy*, **36**(4), 363–374.
- Eichengreen B, Chi¸ L, *et al.* (2015). “Stability or Upheaval? The Currency Composition of International Reserves in the Long Run.” *IMF Economic Review*.
- Eichengreen B, Flandreau M (2012). “The Federal Reserve, the Bank of England, and the rise of the dollar as an international currency, 1914–1939.” *Open Economies Review*, **23**(1), 57–87.
- Eichengreen B, Kawai M (2015). *Renminbi Internationalization: Achievements, Prospects, and Challenges*. Brookings Institution Press.
- Fernndez A, Klein MW, Rebucci A, Schindler M, Uribe M (2015). “Capital Control Measures: A New Dataset.” *NBER Working Papers 20970*, National Bureau of Economic Research, Inc. URL <https://ideas.repec.org/p/nbr/nberwo/20970.html>.
- Galati G (2000). “Trading volumes, volatility and spreads in foreign exchange markets: evidence from emerging market countries.” *BIS Working Paper*. URL <http://www9.georgetown.edu/faculty/evansm1/New20Micro/Galati.pdf>.
- Gallagher KP (2014). *Ruling capital: Emerging markets and the reregulation of cross-border finance*. Cornell University Press.
- Gao H, Yu Y, *et al.* (2011). “Internationalisation of the renminbi.” *BIS Papers*, **61**, 105–124.

- Garcia-Herrero A, Xia L (2013). “China's RMB Bilateral Swap Agreements: What explains the choice of countries?” *Working Papers 1318*, BBVA Bank, Economic Research Department. URL <https://ideas.repec.org/p/bbv/wpaper/1318.html>.
- Goldberg LS, Tille C (2008). “Vehicle currency use in international trade.” *Journal of International Economics*, **76**(2), 177–192.
- Gopinath S (2011). “An internationalised rupee?” In B for International Settlements (ed.), “Currency internationalisation: lessons from the global financial crisis and prospects for the future in Asia and the Pacific,” volume 61 of *BIS Papers chapters*, pp. 210–212. Bank for International Settlements.
- Hausmann R, Panizza U (2003). “On the determinants of Original Sin: An empirical investigation.” *Journal of International Money and Finance*, **22**(7), 957–990. URL <https://ideas.repec.org/a/eee/jimfin/v22y2003i7p957-990.html>.
- He D, Yu X (2016). “Network effects in currency internationalisation: Insights from {BIS} triennial surveys and implications for the renminbi.” *Journal of International Money and Finance*, **68**, 203 – 229. ISSN 0261-5606. URL <http://www.sciencedirect.com/science/article/pii/S0261560616300882>.
- Hutchison MM, Pasricha GK, Singh N (2012). “Effectiveness of capital controls in India: Evidence from the offshore NDF market.” *IMF Economic Review*, **60**(3), 395–438.
- IGIDR Finance Research Group (2016). “Features and trends of NDF markets for Emerging Economy Currencies: A study of the Indian Rupee.” *Report*, Indira Gandhi Institute of Development Research. URL <http://www.ifrogs.org/POLICY/ndfReport.html>.
- IMF (2015). “Survey on the holdings of currencies in official foreign currency assets.” *Survey*, IMF.
- Ito H, Chinn M (2014). “The Rise of the Redback and the People's Republic of China's Capital Account Liberalization: An Empirical Analysis of the Determinants of Invoicing Currencies.” *ADBI Working Papers 473*, Asian Development Bank Institute. URL <https://ideas.repec.org/p/ris/adbiwp/0473.html>.
- Ito T (2016). “A New Financial Order in Asia: Will a RMB bloc emerge?” *Working Paper 22755*, National Bureau of Economic Research. URL <http://www.nber.org/papers/w22755>.
- Kenen PB (2011). “Currency internationalisation: an overview.” In B for International Settlements (ed.), “Currency internationalisation: lessons from the global financial crisis and prospects for the future in Asia and the Pacific,” volume 61 of *BIS Papers chapters*, pp. 9–18. Bank for International Settlements. URL <https://ideas.repec.org/h/bis/bisbpc/61-04.html>.
- King MR, Mallo C (2010). “A user’s guide to the Triennial Central Bank Survey of foreign exchange market activity.” *Technical report*, Bank of International Settlements. URL http://www.bis.org/publ/qtrpdf/r_qt1012h.pdf.

- Kumar H, Mathur A, Patnaik I, Shah A (2015). “How big is the trading in the Rupee?” *Report*, National Institute of Public Finance and Policy.
- Langedijk S, Karagiannis S, Evangelia P (2016). “Invoicing Currencies in International Trade - Drivers and Obstacles to the Use of the Euro.” *Report*, European Commission. URL http://ec.europa.eu/economy_finance/euro/world/documents/final_report_20160108_en.pdf.
- Lee JW (2014). “Will the renminbi emerge as an international reserve currency?” *The World Economy*, **37**(1), 42–62.
- LSE (2016). “London Stock Exchange Masala Bond List.” *Report*, London Stock Exchange. URL <http://www.lseg.com/masala>.
- Ma G, McCauley RN (2013). “Is China or India more financially open?” *Journal of International Money and Finance*, **39**, 6–27.
- Ma G, Villar A (2014). “Internationalisation of emerging market currencies.” In B for International Settlements (ed.), “The transmission of unconventional monetary policy to the emerging markets,” volume 78 of *BIS Papers chapters*, pp. 71–86. Bank for International Settlements. URL <https://ideas.repec.org/h/bis/bisbpc/78-04.html>.
- McCauley RN, Shu C (2016). “Non-deliverable forwards: impact of currency internationalisation and derivatives reform.” *Technical report*, Bank of International Settlements. URL http://www.bis.org/publ/qtrpdf/r_qt1612h.htm.
- Moore M, Schrimpf A, Sushko V (2016). “Downsized FX markets: causes and implications.” *Technical report*, Bank of International Settlements. URL http://www.bis.org/publ/qtrpdf/r_qt1612e.htm.
- Pandey R, Pasricha GK, Patnaik I, Shah A (2016). “Motivations for capital controls and their effectiveness.” *Working Papers 16/168*, National Institute of Public Finance and Policy. URL <https://ideas.repec.org/p/npf/wpaper/16-168.html>.
- Patnaik I, Shah A (2012). “Did the Indian capital controls work as a tool of macroeconomic policy?” *IMF Economic Review*, **60**(3), 439–464.
- Ranjan R, Prakash A (2010). “Internationalisation of Currency : The case of the Indian Rupee and Chinese Renminbi.” *Report*, Reserve Bank of India. URL <https://rbi.org.in/scripts/PublicationReportDetails.aspx?UrlPage=&ID=588>.
- Sengupta R (2016). “The impossible trinity: Where does India stand?” In “International Trade and International Finance,” pp. 511–523. Springer.
- Shu C, He D, Cheng X (2015). “One currency, two markets: the renminbi’s growing influence in Asia-Pacific.” *China Economic Review*, **33**, 163–178.
- Standing Council on International Competitiveness of the Indian Financial System (2015). “Report of the Standing Council on international competitiveness of the Indian Financial System: Volume I.” *Report*, Department of Economic Affairs, Ministry of Finance. URL <http://finmin.nic.in/reports/Standing%20Council%20Report%20IFS.pdf>.

SWIFT (2016). “RMB Tracker.” *Report*, Society for Worldwide Interbank Financial Telecommunication. URL <https://www.swift.com/our-solutions/compliance-and-shared-services/business-intelligence/renminbi/rmb-tracker>.

Tayal R (2013). “Impact of restrictions on the trading of currency derivatives on market quality.” *Report*, Finance Research Group, IGIDR. URL http://ifrogs.org/PDF/201309_restrictionsOnCurrencyDerivatives.pdf.

Zhou X (2009). “Reform the international monetary system.” *Speech*, People’s Bank of China. URL <http://www.pbc.gov.cn/english/130724/2842945/index.html>.

6 Appendix: List of countries

Table 13 List of countries

| Country Code | Country |
|--------------|----------------|
| IN | India |
| BR | Brazil |
| CN | China |
| RU | Russia |
| KR | South Korea |
| PE | Peru |
| CZ | Czech Republic |
| HU | Hungary |
| CL | Chile |
| ID | Indonesia |
| TH | Thailand |
| MY | Malaysia |
| CO | Colombia |
| MX | Mexico |
| TR | Turkey |
| ZA | South Africa |
| PL | Poland |
| PH | Philippines |

7 Appendix: FEMA restrictions

Table 14 General permission current account restrictions

| S.No. | Particulars | Limitations |
|-------|---|---|
| 1 | Private visit to any country (except Nepal and Bhutan) | USD 10,000 or its equivalents in one year for one or more private visit. |
| 2 | Gift/donations per remitter/donor | Gift/Donations are under liberalized Remittance Schemes of USD 1,25,000 for resident individuals. Remittance should not exceed USD 1,25,000 during a particular FY |
| 3 | Donations by Corporate | 1% of the foreign exchange earnings during the previous three FY or USD 5 million, whichever is less, for a specified purpose |
| 4 | Going abroad for employment | USD 1,00,000 one time only |
| 5 | Remittance facility for emigrations | USD 1,00,000 or the amount prescribed by country of emigration not exceeding USD 1,00,000 one time only. |
| 6 | Remittance for maintenance of close relatives abroad | "Net salary (after deduction of tax, PF and other deduction) of a person who is resident but not permanent resident in India and citizen of foreign state other than Pakistan. USD 1,00,000 per year per recipient in all other cases |
| 7 | Business Travel Abroad | USD 25000 per trip respective of stay |
| 8 | Attending conference or specialized training | USD 25000 |
| 9 | Meeting expenses of Medical treatment | USD 1,00,000 |
| 10 | Maintenance expenses of a patient going for medical treatment of medical checkup abroad | USD 25000 |
| 11 | Studies abroad | USD 1,00,000 per academic Year or estimation from the Institution abroad whichever is higher. |
| 12 | Meeting expenses of accompanying as attendance to a patient going abroad for medical treatment or medical checkup | USD 25000 |
| 13 | Commission to agent abroad for selling of residential flats or commercial plot in India | USD 25000 or 5 % of inward remittance per transactions whichever is higher |
| 14 | Consultancy services from outside India | "USD 1 million per project to USD 10 million per project (in case of infrastructure project) |
| 15 | Reimbursement of pre-incorporation expenses | 5% of the investment brought into India or USD 100,000 whichever is higher, |
| 16 | Remittance for use and/or Purchase of Trade mark | Freely allow without approval of RBI |
| 17 | Remittance for securing Insurance for Health from a company abroad | Freely allow |
| 18 | Remittance of royalty and payment of lump sum fee under the technical collaboration agreement | Freely allow without any prior approval of RBI |
| 19 | Release of exchange for medical treatment outside India when a person has fallen sick after proceeding abroad | Extent of USD 1,00,000 without any hassles and any loss of time on the basis of self declarations |
| 20 | Small Value Remittance | Up to USD 25000 (form A2) |

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