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Renminbising China's Foreign Assets*

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Abstract

Since the 2008 global financial crisis, China has rolled out a number of initiatives to actively promote the international role of the renminbi and to denominate more of its international claims away from the US dollar and into the renminbi. This paper discusses the factors shaping the prospects of internationalising the renminbi from the perspective of the currency composition of China's international assets and liabilities. These factors include, among others, underlying valuation and management of the renminbi.

Keywords: Renminbi Internationalisation, Net International Asset Position, Convertibility, Exchange Rate Uncertainty, Dollar Peg
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1. Introduction

The financial crisis highlighted the pivotal role of the US dollar in international finance and gave rise to a dollar shortage more acute than that of the 1950s. To an extent that had not been appreciated, European banks had financed huge sums of dollar assets with funds borrowed from other banks, from US money market funds and from central banks (McGuire and von Peter, 2009 and Baba *et al.,* 2009). The US authorities responded to the dollar shortage by entering into dollar swaps with central banks on an unprecedentedly broad scale and, with major central banks, in unlimited amounts (Committee on the Global Financial System, 2010). Yet the temporarily scarce dollar and the policy response served to highlight the dependence of the international financial system on a currency subject to national management. For example, international trade between countries outside the United States was at risk from the difficulty of banks in either country in rolling over dollar liabilities in the interbank market. To a system engineer, it might appear to be a negligent design that left such a "single point of failure" in the international financial system.

2. Chinese Policies to Promote the Internationalisation of the Renminbi

Against this background, a number of recent initiatives suggest that the Chinese authorities have adopted a more active strategy to promote the internationalisation of the renminbi. The change is evident in the contrast, for instance, between Dobson and Masson (published in 2009 but written in early 2008) and Gao and Yu (2009). In what follows, we first discuss the rationale for this strategy, contrasting the positions of China and Japan, and then briefly sketch the policies undertaken so far.

2.1 Rationale and Strategy

Most commentary has interpreted this strategy as deriving from doubts about the US dollar as a store of value. By contrast, we emphasise instead the specific nature of China's international balance sheet. This shows a rapidly increasing foreign exchange exposure. This exposure derives from the combination of China's openness to equity investment from the rest of the world, its current account surpluses, and the lack of internationalisation of the renminbi.

Like most industrial countries, China is short its own currency and long other currencies (counting inward direct investment and inward portfolio equity as renminbi liabilities). This position derives from the exchange of equities allowed by international capital mobility. To illustrate the situation, one can imagine two islands very distant from each other and therefore enjoying different rainfall and sunshine. They agree to exchange each year a share of each other's harvests (i.e. equities). As a result, each would be long the other's harvest (currency). In this regard, China is actually more open than Japan: non-residents have a

stake in China's equities (direct investment and portfolio) equivalent to 24% of China's GDP (Ma and Zhou, 2009), but a stake in Japan's equities of only 17%.

China, like Japan, has a growing second source of a net long position in foreign currency, a succession of current account surpluses. Over time, these flows cumulate into the stock known as the net international investment position. As can be seen on Figure 1, China's net international asset position is converging on that of Japan, at 40-50% of GDP (Ma and Zhou, 2009). If such a surplus country has a currency not much used by non-residents, then the claims on the rest of the world pile up in foreign currency. In this case, the net international asset position and the net equity position held by the rest of the world add to give the total long foreign exchange position of a country. This is China's current situation, now approaching 60% of GDP in a long foreign currency position (Figure 1).

In contrast, the internationalisation of the yen, modest as it is, means that the rest of the world uses the yen to some extent to denominate liabilities and assets, allowing the rest of the world to share Japan's aggregate foreign exchange exposure. Indeed, Lane and Shambaugh (2010) estimate that Japan has net yen claims on the rest of the world to the extent of 2% of GDP. If this is so, then Japan's net long position in foreign currency is below the dotted line in Figure 1. China, in its short life as a substantial creditor nation, has thus already racked up as much aggregate foreign exchange exposure in relation to GDP as Japan (China's dotted line has reached Japan's were Japan's net yen claims subtracted).

In sum, even though China's net international assets remain a smaller proportion of its GDP than in the case of Japan, its aggregate long position in foreign exchange bulks as large as that of Japan. This is owing both to the greater share of GDP in foreign holdings of equities in China, and to the lack of internationalisation of the renminbi. Given the combination of openness to foreign direct investment and capital controls that have kept the rest of the world from borrowing renminbi, China presents a clear case of being long foreign currency, not least the dollar, and short domestic currency. The short-term strategy of redenominating China's claims toward the renminbi would be consistent with normalising its international balance sheet. We call this strategy of denominating China's claims on the rest of the world in renminbi the "renminbisation" of China's foreign assets.

Indeed, what Takagi (2009) considers the yen's limited success as an international currency provides a benchmark for this near-term strategy for the renminbi. On the asset side of Japan's international balance sheet are (non-reserve) debt securities issued by firms, governments and banks in the rest of the world equivalent to 35% of Japan's GDP (almost twice as large as Japan's official foreign exchange reserves). The Bank of Japan reports that almost one-third of holdings of these debt securities, amounting to 11.6% of GDP, are yen denominated. Based on this experience, something like a third of China's non-reserve holdings of securities might come to be denominated in renminbi. This would be a more realistic medium-term goal than trying to attain the much higher fraction prevalent in the United States, where some 90% of US holdings of foreign debt securities are dollar-denominated. In this scenario, China's pension funds and

insurance companies could to a significant extent diversify away from Chinese credit risk, by buying securities issued by non-Chinese firms and sovereigns, without taking on foreign currency risk by buying renminbi-denominated securities.

In addition to the private sector's acquisition of bonds issued by nonresidents in domestic currency, China's could reduce its aggregate exchange rate risk by denominating more of its official claims on the rest of the world in renminbi. To continue with the Japanese parallel, the Japan Bank for International Cooperation (the result of the merger of the export-import bank with the development bank) lends yen to governments and firms in the rest of the world. Translated into dollars, it shows loans in yen at $119 billion, and loans in foreign currency at $41 billion. The yen loans amount to 2.7% of Japan's GDP. As China expands its aid operations in Asia, Africa and Latin America, it would have considerable scope to redenominate its official claims into renminbi.

Trade finance has been much the focus of the policy measures since the start of the global financial crisis, but, by itself, it is unlikely to spread the foreign exchange risk of China to the rest of the world appreciably. Taking again Japan, Takagi (2009) reports that 36.7% of Japanese exports were yen denominated in 2002. A similar proportion of Chinese exports would be larger in proportion to Chinese GDP, given the greater openness of China's economy. However, what must be recalled is that China's imports, too, could be expected to be redenominated into renminbi. True, the Japanese experience suggests a smaller fraction of imports might be denominated in domestic currency (25.5% of Japanese imports in 2002). For China to accumulate substantial net trade claims on the rest of the world would require a larger asymmetry than seen in the case of Japan. That said, the redenomination of trade into renminbi would be consistent with a growth of bonds and official debts denominated in renminbi, so the indirect effects still might be considerable.

Use of the renminbi to denominate bonds, official credits and trade could result in the renminbi gaining as a currency in the foreign exchange market. There is ample room for the renminbi to advance in this regard. Between 2004 and 2007, daily trading in the renminbi expanded enough to surpass the sum of daily imports and exports from China (Figure 2). By contrast, even the un-internationalised Indian rupee or the partially internationalised Korean won traded 10 times as much as the sum of Indian or Korean international trade. And thoroughly internationalised currencies trade 100 times as much. The renminbi has a long way to go.

This strategy of replacing dollar claims on the rest of the world with renminbi claims would also have implications for the euro. An alternative strategy to redenominating China's claims on the rest of the world would be to diversify holdings away from the dollar and into other major currencies. If dollar-denominated bonds were replaced by euro-denominated bonds, then the euro would come under upward pressure against the dollar (Blanchard, Giavazzi and Sa, 2005). Only if dollar- and euro-denominated bonds were

perfect substitutes in investors' portfolios would such a diversification by China have no effect (much like sterilised intervention under the same assumption; see Genberg *et al.,* 2005).

These two strategies – renminbisation of foreign assets and diversification to the benefit of the euro – can be pursued simultaneously and can be combined. Thus the People's Bank of China has decided to purchase notes from the IMF denominated in special drawing rights (SDR) in an amount up to SDR 32 billion. Were China ultimately to provide dollars to the IMF in exchange for such bonds, it would be diversifying from the dollar into the euro, and to a lesser extent the yen and sterling, since these currencies along with the dollar form the SDR basket. This diversification to the benefit of the euro is the most likely ultimate result, but market participants have focused on the means of payment agreed by the Chinese authorities and the IMF, namely renminbi (People's Bank of China and International Monetary Fund, 2009). This is taken as a sign of the internationalisation of the renminbi, but it need not be so. An example may suggest why the use of the renminbi in this transaction could be quite ephemeral. When the IMF draws on the Saudi Arabian Monetary Agency (SAMA), it may receive riyal in the first instance. Even if the riyal is passed onto the country borrowing from the IMF, the latter could be expected to exchange the riyal for a major reserve currency, probably dollars, from SAMA. That said, there could be a larger interaction in the longer term, were the renminbi to become one of the currencies in the SDR basket (see below). For the time being, however, this agreement between the People's Bank of China and the IMF should be understood as more diversification across the major currencies, than as a use of the renminbi to redenominate China's claims on the rest of the world.[1]

Were the strategy of redenominating China's international claims into renminbi to be pursued to the point of making the role of the renminbi in international finance commensurate with the weight of China as a trading and producing nation, it would have implications for the IMF's SDR. The last five-year review of the SDR valuation in December 2005 set out two criteria for inclusion of a currency in the SDR. First, is whether the scale of exports of goods and services places a currency among the top four currency areas in the world (treating the euro area as just one of the top four). Second, is whether the currency is freely usable, meaning that it is in fact widely used and widely traded in the foreign exchange market.[2]

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[1] The ultimate effect on the foreign exchange market would depend on the behaviour of the borrower from the IMF. If the latter received its SDR-denominated credit from the IMF in dollars, added the sum to its reserves, but sought to match its SDR-denominated liability, then it would sell some of the dollars for euro, yen and sterling. Under these assumptions the effect on the foreign exchange market would be much the same as if China itself had diversified from the dollar to the SDR. It should also be noted that by exchanging a dollar bond for the IMF bond, China would be diversifying by obligor as well as currency.

[2] From the five-year review: "SDR Valuation: The criteria for selecting the currencies in the SDR basket are the same as in the previous review: The currencies included in the SDR shall be the four currencies issued by Fund members, or by monetary unions that include Fund members, whose exports of goods and services during the five-year period ending 12 months before the effective date of the revision had the largest value and which have been determined by the Fund to be freely usable currencies in accordance with Article XXX (f). In the case of a monetary union, trade between members of the union is excluded from the calculation."

The weights assigned to the currencies in the SDR basket are based on the value of the exports of goods and services and the amount of reserves denominated in the respective currencies which are held by other members of the IMF.

These two criteria point near and far. The first of these criteria would place the renminbi in the SDR at next opportunity, albeit with a weight that would reflect near-zero holdings of renminbi in official reserves. The second, "freely usable" could be a more remote prospect. There is both the "widely used" aspect, which bilateral agreements with trading partners could promote. But there is also a market criterion regarding the trading of the renminbi. As noted above, the renminbi has a very long way to go on this criterion.

Given these criteria, it is hard to imagine that the renminbi could be considered for inclusion in the SDR as early as the review in 2015. 2020 might not just be good eyesight but also a serious possibility for the renminbi to join the SDR if capital controls were eased sufficiently.

2.2 Policies

In an apparent departure from its previous go-slow stance regarding renminbi internationalisation, the Chinese government has since late 2008 proactively rolled out a number of measures aimed to increase the international use of the renminbi. First, the People's Bank of China (PBC) has so far signed bilateral renminbi currency swap agreements with six central banks, totalling RMB650 billion (US$95 billion). Such agreements permit swaps between the renminbi and the local currency of the counterparty for a maturity of three years, which is extendable (Table 1). The dollar liquidity shortage and contracting trade flows during the global financial turmoil might potentially give this policy initiative a favourable start.

These swaps can be seen as potentially back-stopping the second initiative, denominating trade in renminbi. In April 2009, the Chinese State Council approved a pilot scheme for cross-border trade settlement in renminbi, initially involving Shanghai and four other Chinese cities in Guangdong Province, on the one hand, and Hong Kong on the other. So far, the pilot includes some 400 Chinese trading companies. Reportedly, China is also talking to both Brazil and Malaysia about the possibility of using local currencies in settling their bilateral trade, possibly backstopped with the bilateral swaps. An HKMA research paper (Cui, Chang and Chang, 2009) estimates that as much as 20%-30% of China's $2.5 trillion annual exports and imports could be settled in renminbi if capital account convertibility were fuller. As noted above, the experiment would result in both gross renminbi-denominated foreign claims and liabilities for China.

Third, are initiatives and prospective initiatives involving official finance and renminbi bond issues in Shanghai and Hong Kong. The Chinese government could follow the Japanese lead and extend foreign aid loans in renminbi in the future. For instance, the China Development Bank (2009) reports that 4.65% of its RMB2.9 trillion loans are made outside the mainland. These thus amounted to RMB135 billion,

Article XXX (f) defines a "freely useable currency" in this manner: '(f) A freely usable currency means 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."

equivalent to about $20 billion. As such loans are extended in the future, they could be denominated in renminbi. Similarly, to increase the portion of China's renminbi-denominated foreign claims on the rest of the world, it has been proposed that the Chinese government welcome additional issuance of panda bonds – bonds issued by non-residents, denominated in renminbi and issued in the Chinese domestic bond market (Yu, 2008).

In 2005, the International Financial Corporation and the Asian Development Bank issued RMB1.13 billion and RMB1 billion of panda bonds, respectively, though the proceeds were to be used to fund the local operations of the issuers. Finally, in addition to Chinese financial institutions, selected foreign banks operating in China have also been authorised to issue renminbi-denominated bonds in Hong Kong (Table 2). On top of these, the Chinese Ministry of Finance decided to issue RMB6 billion of renminbi-denominated sovereign debts in Hong Kong in September 2009, a pioneer move with the dual purpose to enhance the international role of the renminbi as well as provide a benchmark for other renminbi bonds listings in Hong Kong. Although this would only tend to increase China's renminbi-denominated foreign liabilities (or equivalently increase China's long foreign currency position), the move may promote the role of the renminbi in offshore financial transactions generally.

While much of the discussion of the Chinese policy concerns its advantages for the Chinese, it should be remembered that it takes two to tango. Why should external obligors accept the denomination of their liabilities in renminbi? In particular, why would parties outside of China accept to owe renminbi if it were subject to the risk of rapid appreciation against other currencies? After all, at present the Chinese bear the balance sheet risk of a sudden appreciation of the renminbi against foreign currencies. Were parties outside of China to share in this risk, then the incentives for China to prevent such an appreciation would be to some extent attenuated (a moral hazard point: the distribution of risk may affect behaviour.) Or, a more subtle problem, is the renminbi thought likely to track the US dollar closely? The following two sections take up the questions of whether potential renminbi obligors outside of China would be deterred by the prospect of a sharp appreciation of the renminbi, and whether the renminbi may be expected to shadow the US dollar so closely as to offer little advantage as a currency in which to denominate obligations.

3. Does the Risk of a Sharp Appreciation Hinder Renminbi Internationalisation?

One pre-condition of renminbi internationalisation is that borrowers in other countries are willing to hold their liabilities denominated in renminbi. If the renminbi is perceived as severely undervalued and as subject to a prospective sharp appreciation, it would be a hard sell to get other countries to hold liabilities denominated in renminbi. Such unwillingness to borrow renminbi would present a major hurdle for internationalising the renminbi.

The concern, or even hope, of sharp appreciation is not uncommon among observers who argue that the renminbi is substantially undervalued. Indeed, there are both academic and policy studies that suggest the Chinese renminbi is substantially undervalued, although the estimated extent of undervaluation varies considerably from one study to the other (for example, Frankel, 2006 and Goldstein and Lardy, 2008).[3] Most of these studies, however, overlook or understate the notorious difficulty of determining of the level of renminbi undervaluation.

Before we could assess renminbi's level of undervaluation, the overarching issue is, of course, how to define its appropriate (or in economic jargon, its equilibrium) value. In addition to the difficulty that economists have encountered in predicting exchange rate changes (Meese and Rogoff, 1983), economists have had a hard time agreeing on a benchmark for an appropriate exchange rate value (Cheung, Chinn and Garcia Pascual, 2005). Without a consensus exchange rate model, potential borrowers in the renminbi will naturally interpret with great caution assertions about the level of renminbi's undervaluation.

Cheung, Chinn and Fujii (2007) highlight the uncertainty surrounding any calculation of the extent of renminbi undervaluation. We recap their argument based on the well-known empirical relationship between exchange rate and real income, according to which prices, especially those of nontraded goods and services, tend to be higher in countries with higher per capita income.[4] While one can obtain a quantitatively large misalignment estimate, it is hard to argue that the estimated misalignment rises to statistically significant evidence of undervaluation. The point is illustrated in Figure 3, which traces out a) the actual real renminbi exchange rate (the red line; higher values indicate a stronger, more appreciated renminbi), b) the "equilibrium" real exchange rate predicted by the empirical exchange rate and income relationship (the blue line), and c) the one- and two-standard error bands associated with the predicted equilibrium rates (the blue dotted lines). Undervaluation is observed when the actual rate is lower than the predicted rate.

The scatter of dots in the background plot the exchange rate and price data for a panel of 160 countries over the maximum of a 30-year period from 1975 to 2004 which was used to generate the results. One important feature of the figure is the width of the standard error bands. This wide range underscores the uncertainty surrounding exchange rate determination. This evidence suggests that, in the 2000s, the renminbi was undervalued and its value was less than its predicted equilibrium value – but also that its value remained within the two standard error band. This is the criterion economists commonly use to assess if the evidence is statistically significant or not.

[3] Cheung, Chinn and Fujii (2009a) offer a typology of studies.

[4] Cheung, Chinn and Fujii (2007) showed that their basic argument is robust in the presence of other possible determinants including demographic variables, measures of trade openness, current account balance, government deficit, the extent of capital controls, and corruption.

The two standard error band criterion may be, oddly enough, too easy on the hypothesis of renminbi undervaluation. Indeed, the results in Figure 3 are subject to the serial correlation problem, which in effect means that we have fewer independent data points than is suggested by the number of observations. Figure 4 traces the time evolution of the renminbi value, its predicted equilibrium value, and the associated standard error bands that are not subject to the serial correlation problem. The estimated renminbi misalignment is substantially reduced after explicitly accounting for serial correlation. Thus, the large undervaluation observed in Figure 3 would appear to be overstated, an artifact of not properly accounting for serial correlation in the estimation procedure.

Key to this analysis is the reliability of the data on the Chinese real income level. In particular, the undervaluation estimates reported above are based on historical relative prices, which have undergone drastic changes during recent rapid growth periods. Two years ago, the World Bank in cooperation with the Asian Development Bank reported new relative price estimates that effectively revised down China's gross national product in purchasing power parity terms (its real income) and revised up its real exchange rate. Cheung, Chinn and Fujii (2009b) update their previous results using these new estimates, which are deemed to offer a more accurate description of China's economy (Asian Development Bank, 2007; International Comparison Program, 2007). The results are summarized in Figure 5, which has the same format as Figure 3. The startling outcome is that these new data imply a substantial reduction in the estimated degree of renminbi undervaluation. That is, the previously reported undervaluation estimates depended on the use of unrevised and now out-dated information in evaluating the current economic environment. This revision and its consequence for the estimation highlight another dimension to the difficulty in accurately assessing the degree of renminbi misalignment.

Stepping back, a quick review of the current status of exchange rate economics suggests the ambiguity of determining an equilibrium exchange rate is not a surprising result. Indeed, the imprecise and ambiguous results are not unique to Cheung, Chinn and Fujii (2007, 2009b). Dunaway and Li (2005) and Dunaway *et al.* (2009), of the International Monetary Fund, for example, raise concerns about the reliability of the reported renminbi undervaluation estimates from a different perspective. These authors show that a given approach can give rise to a wide range of undervaluation estimates. They also report that, for the commonly used equilibrium exchange rate models, small changes in model specifications, explanatory variable definitions, and sample periods can lead to unexpectedly large variations in equilibrium exchange rate estimates. In the context of renminbi valuation, these studies reinforce our illustration above of the complexities and difficulties inherent to empirical exchange rate modeling.

Do these studies imply that the renminbi is not undervalued? No, weak empirical evidence does not exclude the possibility of undervaluation. The evidence, in fact, is so weak that we could not reject a wide range of hypotheses related to renminbi valuation. Instead of arguing for undervaluation or overvaluation, the relevant message is that it is hard to deliver a renminbi undervaluation verdict that meets the

standards of careful empirical work expected of academic study. Nonetheless, it is reasonable to be circumspect about formulating strong policy recommendations on the basis of weak empirical evidence.

Even under thick smoke, governments and firms in China's trading partner countries still have to make a decision on denominating their debts in renminbi. In practice, policymakers and corporate treasurers operate in the here and now of the real world, and not in the academic universe. The difficulty of drawing a clear verdict does not necessarily mean that there is no undervaluation. An alternative approach is to ask the question: "From a practical point of view, should we choose the currency denomination of our debt on the assumption that the Chinese renminbi carries a massive and potentially costly jump risk?" Given the empirical evidence, reputation matters. In the economic arena, the Chinese authorities are perceived to follow a gradualist approach and to focus on economic stability. A massive renminbi revaluation is seen as posing the risk of serious disruption to China's domestic economy and its extensive production and trade networks with other Asian economies. If the recent experience of gradualism is given weight, the prospect of a substantial renminbi revaluation may not block the internationalisation of the renminbi.

4. Does Its Link to the US Dollar Hinder Renminbi Internationalisation?

Most observers believe that the renminbi has moved from dollar peg (1994-2005) to upward crawl against the dollar (2005-2008) to dollar peg again (2008-2009). If this were so, then the internationalisation of the renminbi would surely be inhibited by the prospect of continued linkage to the dollar. All the liquidity advantages of US dollar markets would favour inertia, while the renminbi as a store of value would offer by hypothesis little but the dollar plus noise. (Worse yet, it might face external obligors in renminbi with the prospect of trend appreciation against the dollar and, for a while at least, higher interest rates than the dollar.)

This conventional wisdom, and hence its negative implication for the internationalisation, is not well founded. If, indeed, the Chinese authorities have made an intellectual and practical break from the dollar, and even if the crisis led them to revert to the dollar for a time, then the renminbi stands a better chance to be accepted by obligors. Ma and McCauley (2009) present evidence that the post-July 2005 regime for the renminbi was not just a crawling dollar peg. Instead, from mid-2006 and mid-2008, the Chinese authorities appeared to manage the renminbi against its trade-weighted basket in a manner similar to the long-standing management of the Singapore dollar. Several arguments lend support to this interpretation of the evolving post-2005 renminbi regime.

First, two Chinese flagship central bank reports in early 2008 cited a BIS effective exchange rate measure of the RMB when discussing trends in the renminbi exchange rate, possibly suggesting increased

attention given to the effective exchange rate in the renminbi management.[5] This is a clear sign of breaking away from the tradition established during the Asian financial crisis. Indeed, as argued by Fung *et al*. (2009), in terms of both competitiveness and price stability, effective renminbi stability would often serve China better than bilateral dollar stability.

Second, during 2006-08, the effective renminbi and the effective US dollar mostly moved in opposite directions, amply demonstrating the lost influence of the dollar cycle on the effective renminbi during this episode (Figure 6). This is another sign of the renminbi moving away from a pure dollar peg. Finally, Ma and McCauley provide econometric evidence that in this two-year period, the foreign exchange value of the renminbi showed a tendency to revert to a mean defined by an upward crawl against its trade-weighted basket. Specifically, much in the manner of the Singapore-style exchange rate policy, the effective renminbi seemed to describe a 2% annual crawl within a ±2% band (Figure 7).

However, the renminbi abruptly returned to a tight peg against the US dollar in July 2008 and appreciated substantially in effective terms as a result of a stronger dollar. Ma and McCauley (2009) provide strong evidence that the management policy of the RMB changed in the summer of 2008. The two-year experiment with a basket management for the RMB was apparently interrupted against the backdrop of a deepening global financial crisis. A reversion to dollar stability implied that the effective renminbi to pierce the upper edge of the estimated band on a steep appreciation path (Figure 7). Given the marked strength of the dollar in the latter part of 2008, the Chinese authorities would have had to allow a considerable decline in the renminbi against the dollar in order to maintain effective exchange rate stability.

This policy shift in the renminbi management would be consistent with broad policy concerns about such sustained weakness of the renminbi vis-à-vis the dollar, given the structurally large Sino-US trade imbalance, as well as a new priority to anchor market confidence in times of global financial instability due to the dollar's safe-heaven role. The sharp rise of the dollar in late 2008 certainly came as a surprise to many observers and forced not just currency managers but also portfolio managers to re-assess their strategies. With more normal trading conditions in global foreign exchange markets, the considerations that led to management of the renminbi to appreciate gradually against its trading partners' currencies could re-assert themselves. As argued above, a renminbi less tied to the dollar could be more attractive as a currency in which to borrow.

The Asian experience from mid-2006 to mid-2008 also suggests that East Asian currencies managed against their respective trade-weighted currency baskets can show relative stability against each other, owing to the similarity of these baskets (Ma and McCauley, 2009). For instance, given similarity of the composition of the baskets, when the Chinese were managing the renminbi's effective exchange rate and the Malaysians were managing the ringgit's effective exchange rate, then the ringgit/RMB was fairly

[5] People's Bank of China (2008) and State Administration of Foreign Exchange (2008).

stable. This offers an informal approach to stabilise currencies both in effective terms (globally), which is important for these outward-oriented economies, and in bilateral terms within East Asia, while facilitating the building of political confidence. Though it was overwhelmed by the effect of the global financial crisis on major currencies and capital flows in mid-2008, such an informal approach can create more favourable conditions for an evolution towards monetary cooperation over time.

A more stable renminbi vis-à-vis other East Asian currencies would potentially help promote its regional use over time. Nevertheless, events in 2008 demonstrate that such convergent policy is challenged when heavy outflows from the region's equity markets affect currencies differently owing to different degrees of capital controls or when dollar strength exposes asymmetric constraints to the trade-weighted basket policy.

In sum, the notion that the renminbi has been and therefore will remain basically in the orbit of the dollar requires that the evidence of a two-year experiment be ignored. If the renminbi is once again managed more broadly, there is no reason to consider that China's trading partners will find denominating their debts in the renminbi uninteresting.

5. Conclusions

The global financial crisis may make the rest of the world more open to taking on some of the currency risk in China's international balance sheet. China's interest in sharing some of that rapidly building risk pre-dated the crisis. Recent policies adopted by the Chinese authorities can be interpreted as allowing the rest of the world to denominate debt in renminbi. But if trading partners consider that the renminbi is subject to big jump risk, then prospects for its internationalisation are weak. And if trading partners dismiss the renminbi as simply the US dollar with a greater or lesser trend appreciation, then prospects for its internationalisation are also weak. We have presented evidence to suggest that these views are easily overstated, and that therefore they understate the prospects for the internationalisation of the renminbi. Of course, full internationalisation ultimately requires a wide open capital account. The steps that China is taking should be seen as permitting the internationalisation to begin within capital controls. Lifting the capital controls to allow the full internationalisation of the renminbi remains a policy for another day.

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Table 1. Bilateral Currency Swap Agreements with the People's Bank of China

Counterparty	Date of agreement	Size of the swap lines
Bank of Korea*	12 December 2008	RMB 180 billion and KRW 38 trillion
Hong Kong Monetary Authority	20 January 2009	RMB 200 billion and HKD 227 billion
Bank Negara Malaysia	8 February 2009	RMB 80 billion and MYR 40 billion
National Bank of the Republic of Belarus	11 March 2009	RMB 20 billion and BYR 8,000 billion
Bank Indonesia	23 March 2009	RMB 100 billion and IDR 175 trillion
Central Bank of Argentina*	2 April 2009	RMB 70 billion and ARS billion

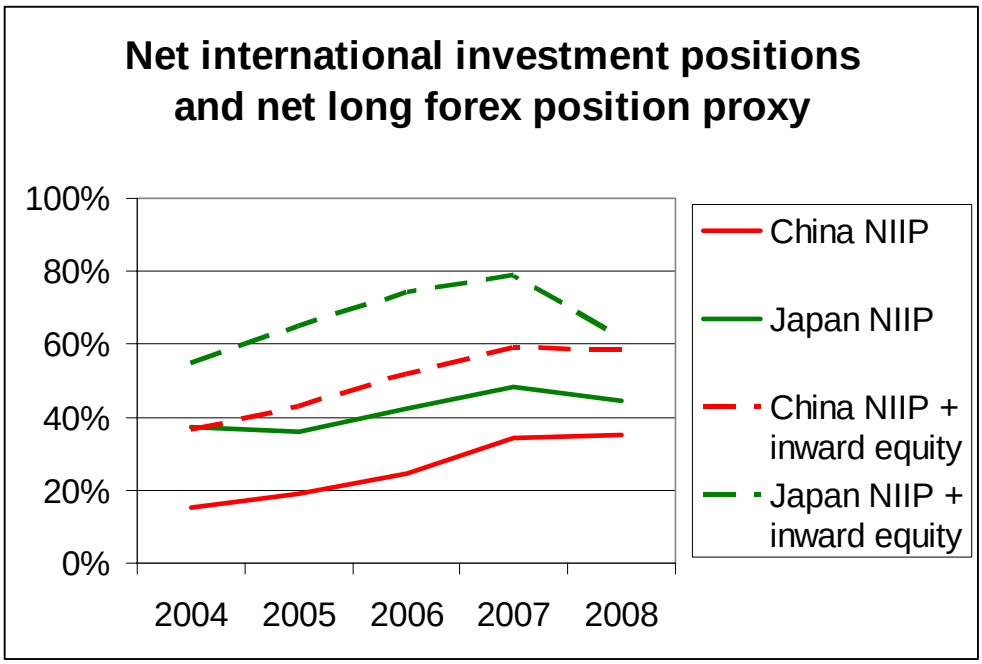
Note: all six swaps have a three-year maturity and are extendable upon agreement by both parties. * The swap agreements with the Bank of Korea and the Central Bank of Argentina are still framework agreements, according to public official announcements. This means that final agreements have not yet been signed.
Source: The People's Bank of China.

Table 2. Renminbi-Denominated Bond Issues in Hong Kong

Issuers	Issuance date	Issuance size	Maturity	Interest rate
China Development Bank	June 2007	RMB 5 bn	2 years	3.00%
Export and Import Bank of China	August 2007	RMB2 bn	2 years	3.05%
Bank of China	September 2007	RMB 3 bn	2 and 3 years	3.15% and 3.35%
Bank of Communication	July 2008	RMB 3 bn	2 years	3.25%
Export and Import Bank of China	September 2008	RMB 3 bn	3 years	3.4%
China Construction Bank	September 2008	RMB 3 bn	2 years	3.24%
Bank of China	September 2008	RMB 3 bn	2 and 3 years	3.25% and 3.4%
Bank of East Asia (China)	July 2009	RMB 1 bn	2 years	2.8%
HSBC (China)	July 2009	RMB 1 bn	2 years	38bp over 3M Shibor
China Development Bank	August 2009	RMB 1 bn	2 years	2.45%

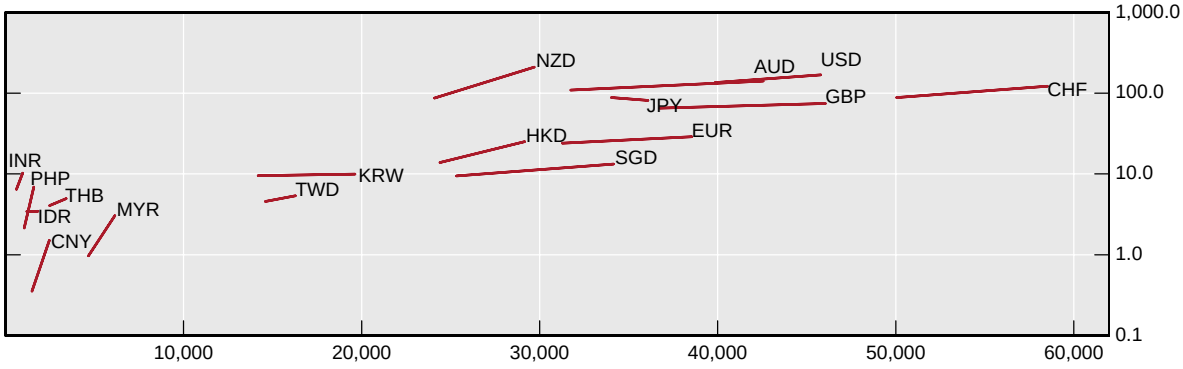
Source: The People's Bank of China and Hong Kong Monetary Authority.

Figure 1. Net International Investment Positions and Net Long Forex Position Proxies of China and Japan, as Share of GDP



Sources: The People's Bank of China; Bank of Japan.

Figure 2. Foreign Exchange Turnover in Relation to International Trade[1]



[1] GDP per capita in US dollars (x-axis); ratio of annualised foreign exchange turnover to international trade in log scale (y-axis). The lines trace the shift from the 2004 observation to the 2007 observation; currency tag placed by the 2007 observation.

Sources: BIS, *Triennial Central Bank Survey of Foreign Exchange and Derivatives Market Activity*, 2007; CEIC; United Nations; national data; authors' own estimates.

Figure 3. The Rate of Possible Renminbi Misalignment Derived from the Pooled Panel Regression Estimates

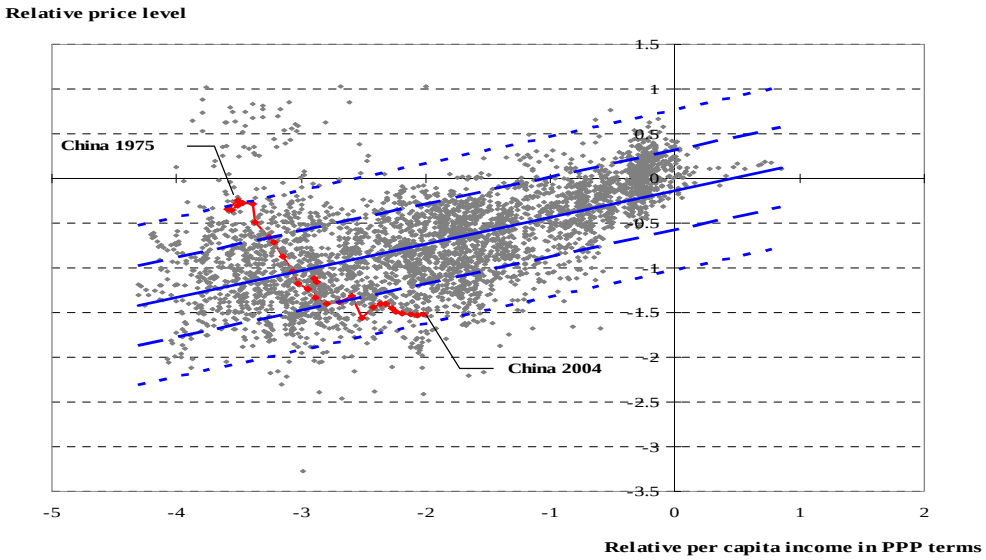


Figure 4. The Actual and Predicted Renminbi Values by the Prais-Winsten Estimates that Explicitly Account for Serial Correlation

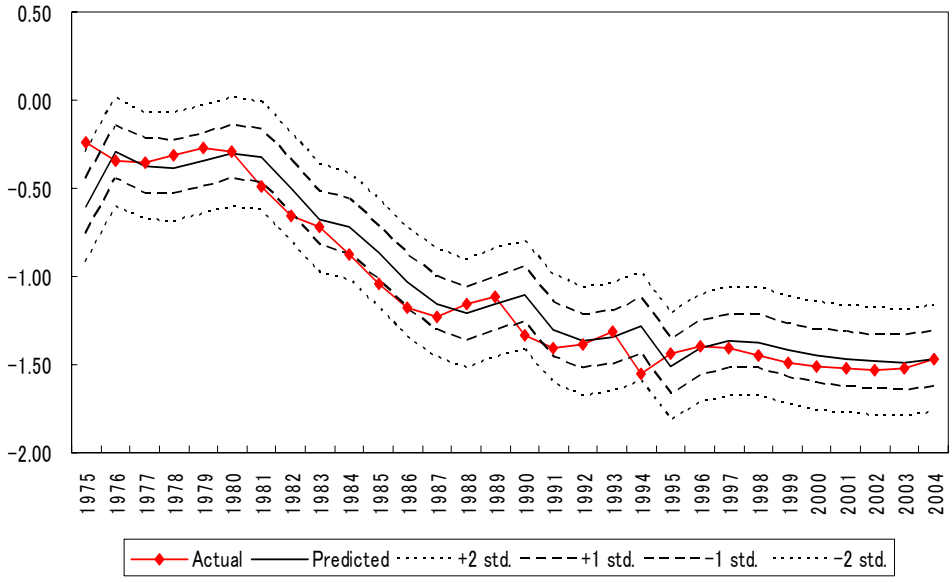


Figure 5. The Rate of Possible Renminbi Misalignment Derived from the Pooled Panel Regression Estimates Using the Recently Revised Data

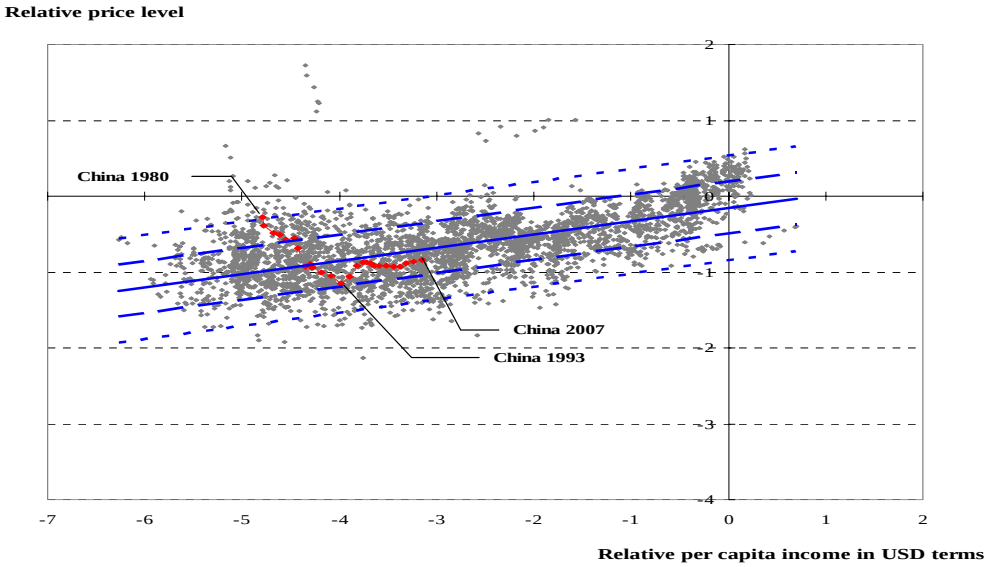
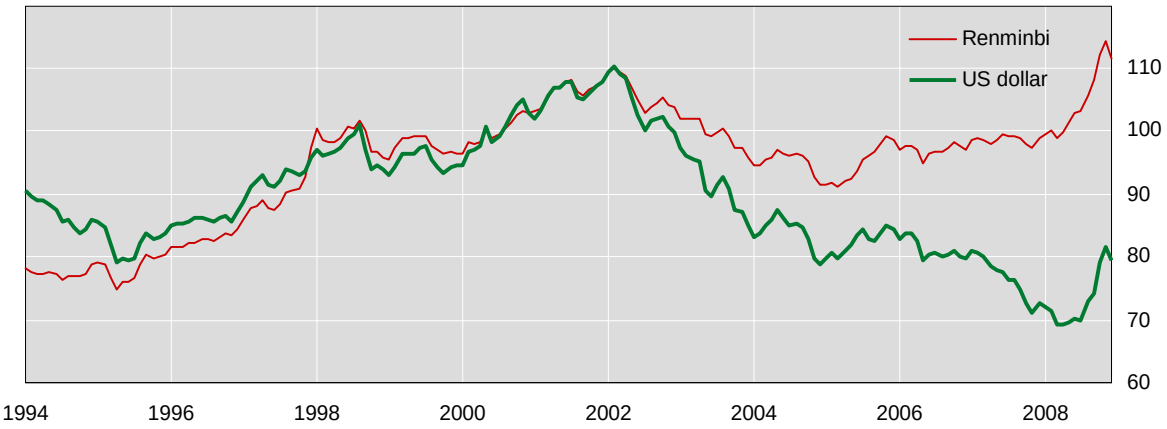


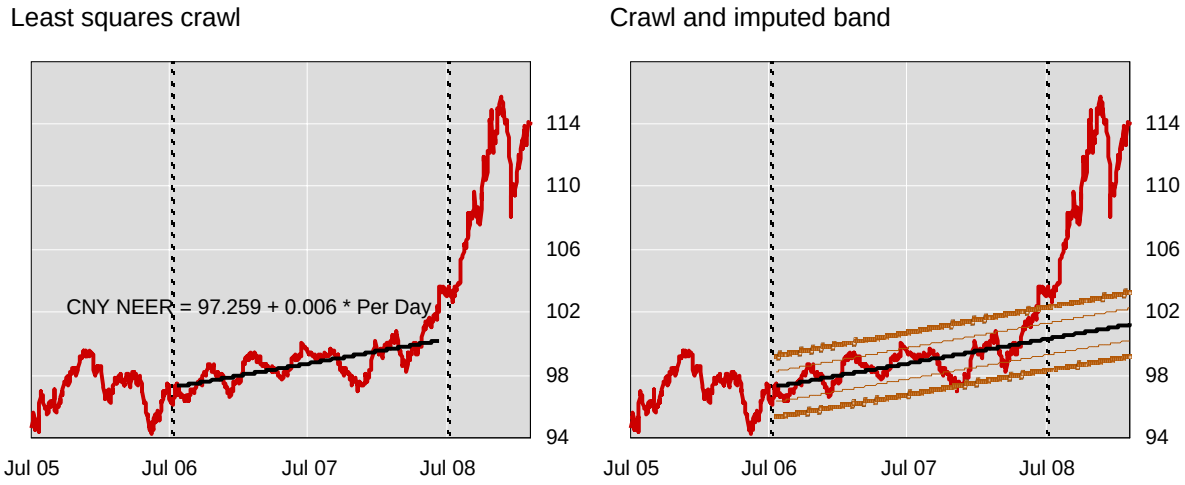
Figure 6. Nominal Effective Exchange Rates of the RMB and US Dollar[1] (Index, 2000 = 100)



[1] US Fed major currencies index for the US dollar and BIS index for the RMB. Monthly observations.

Source: Federal Reserve; BIS; authors' calculations.

Figure 7. Nominal Effect Exchange Rate for the Chinese Renminbi (Index, 2000 = 100)



Note: Daily data. The trend line is estimated over the two-year period of mid-2006 and mid-2008, regressing the BIS NEER against the trading time trend. The thick dotted lines represent ±2% of the trend line, while the thin dotted lines ±1% of the trend line.

Sources: BIS; authors' estimations.