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This paper scrutinises the state of RMB internationalisation and its likely progress over the coming years and discusses its implications for currency co-operation in East Asia. As part of its internationalisation, the RMB is gradually delinked from the dollar, which will effectively put an end to the East Asian dollar standard that has shaped the region's financial architecture over the last three decades and that has provided a relatively high degree of intra-regional exchange rate stability. Because of the close trade and investment ties that have developed across the region, the East Asian countries, especially the ASEAN countries which are striving to create an ASEAN Economic Community, will continue to manage their exchange rates and stabilise their currencies against one another to facilitate cross-border investment and commerce. But instead of a replacing of the dollar standard with an RMB standard we are likely to see some rather loose and informal exchange rate co-operation in East Asia based on currency baskets, with China herself moving towards a managed exchange rate system guided by a currency basket.

JEL classification: E58, F33.

Keywords: RMB internationalisation, key currencies, Chinese economy, East Asian monetary co-operation, currency baskets.

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1. Introduction

The US dollar (henceforth the dollar) has dominated the international monetary system since it replaced the pound sterling as the major reserve currency in the middle of the 1920s (Eichengreen and Flandreau 2009). It was at the centre of the Bretton Woods system, the global monetary system of fixed but adjustable exchange rates that was put into place after the Second World War, and even when the Bretton Woods system broke down in 1971/1973 because of macroeconomic vulnerability and monetary instability in the US economy, the dollar kept its role as the foremost international currency – not least because of a lack of alternatives. The Japanese yen and the German mark, at the time the second and third most important currencies after the dollar, were simply no viable alternatives to the dollar as global reserve, investment and trading currency. In the 1980s, with the rise of the Japanese economy some observers had thought the time had come for the dollar to lose its leading role to the yen (e.g., Burstein 1988). Even though discussions of a "yen bloc" (Kwan 1994) continued until the early 1990s, the burst of the Japanese bubble economy in 1990 led to two lost decades for the Japanese economy, which effectively muted talk of a major role for the yen. With the launch of the euro in 1999, some saw a true competitor to the dollar emerging (e.g., Chinn and Frankel 2007), but since 2010 the European crisis has weighted on the international role of the euro (ECB 2013) and at the moment few expect the euro to become the new world currency.

In the meantime, however, a new candidate has been identified that could dethrone the dollar and become the world's new premier currency: the Chinese renminbi (RMB).[1] Since 2008, the Chinese government has gradually started the process of "internationalising" the RMB. Against the backdrop of the emergence of the Chinese economy and a weak US economy, there has been much talk about the RMB replacing the US dollar as the world’s leading currency. Subramanian (2011: 1), for instance has predicted that "the renminbi could become the premier reserve currency by the end of this decade, or early next decade". Whether this is bound to happen is still an open question, but there can be little doubt that the importance of the RMB, along with that of the Chinese economy, is rapidly growing in the East Asian region.[2]

Given the great importance of the Chinese economy in East Asia, the RMB's progressing internationalisation and a concomitant readjustment of Chinese exchange rate policy will have profound implications on the exchange rate policies of the other East Asian economies and the nature of currency co-operation in the region. Against this background, this paper scrutinises the state of RMB internationalisation and its likely progress over the coming years and discusses its implications for currency co-operation in East Asia. The paper is structured as follows. The next section will review the role of the dollar in the world economy and in East Asia. Section three will examine the process of RMB internationalisation and whether it constitutes a challenge to the dollar's international role. Section four will subsequently discuss the implications of RMB internationalisation for currency co-operation in East Asia. Section five concludes.

[1] Renminbi is the official name of the currency. Yuan is the primary unit of the RMB.
[2] With East Asia, I am referring to China, Hong Kong, Japan, Korea and the ten member countries of the Association of Southeast Asian Nations (ASEAN), i.e., Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam.

2. Role of the US dollar in the world economy and East Asia

2.1 Global dollar dominance

From the last row of Table 1, which shows the currency distribution of global foreign exchange market turnover in April 2013, it becomes clear that with a share of 87.0 percent the dollar is by a large margin the most important currency in foreign exchange markets.[3] With 33.4 percent, the euro comes second and with 23.0 percent the Japanese yen comes third. The RMB had a rather modest share of 2.2 percent, which, however, should not be surprising given that the RMB is not freely tradable. Moreover, it should be noted that the RMB's share rose from a minuscule 0.9 percent in 2010, making it the ninth most actively traded currency globally in 2013. Figure 1 shows the currency composition of official foreign exchange reserves, and again the dollar is by far the most important currency, with a share of 62.2 percent in the first quarter of 2013. This is lower than the 71 percent share in official foreign exchange reserves recorded in 1999-2001, but higher than the 59 percent in 1995. The second most important reserve currency is the euro with a share of 23.7 percent. The effect of the European sovereign debt crisis, which unfolded in 2010, on the euro's role as a reserve currency is clearly visible. The euro's share in foreign exchange reserve allocation has shrunk by four percent since the euro recorded an all-time high of 27.7 percent in 2009.[4] The euro is followed by the yen and the pound with 3.9 percent shares respectively.

[Table 1 and Figure 1 about here]

As can be seen from Table 2, cross-border loans are predominantly denominated in dollar, with a share of total outstanding cross-border loans vis-à-vis non-banks of 43.2 percent in December 2012. 32.8 percent of international loans were made in euro, 5.1 percent in yen, and 4.7 percent in pounds. The dollar is less dominant in international capital markets. While more than a third (35.7 percent) of the amounts outstanding of international bonds and notes (Table 3) are denominated in dollar, the euro has a higher share of 44.2 percent. The pound comes third with a share of 9.2 percent.

[Tables 2 and 3 about here]

With a share of 37.5 percent, the euro was the most-used currency for global payments in May 2013, while the dollar accounted for 36.5 percent of the global payments (Table 4). The euro ranks first not only because the European Union is the world's largest trading bloc, but also because cross-border payments inside the eurozone are accounted for. But even though the dollar ranks only as number two in terms of global payments currency, it is widely used as a payments currency by third countries in transactions that do not involve US firms. The third-widely used currency in global payments was the pound with a share of 8.0 percent, followed by the yen with a share of 2.4 percent. 0.8 percent of percent of global payments were conducted in RMB, making it the 13th most-used currency.

[Table 4 about here]

[3] Because each transaction involves two currencies, the shares sum to 200 percent.
[4] Ironically, the euro was considered a safe haven currency just until the outbreak of the Greek crisis.

Overall, the dollar continues to be the most important reserve currency as well as the most important currency in foreign exchange markets and for international lending.

2.2 The dollar's role in East Asia

The dollar has long been the dominant currency in the East Asian region. For the past decades, East Asian countries with the exception of Japan have all adhered to what McKinnon (2005) has termed the "East Asian dollar standard", or what Dooley et al. (2003, 2009) have dubbed the "Bretton Woods II system" – an informal standard under which countries have stabilised the exchange rate of their currencies to the dollar. The degree of exchange rate stabilisation vis-à-vis the dollar has varied among countries and over the years.[5] Up the outbreak of the Asian crisis in 1997 most countries maintained rather rigid exchange rate pegs to the dollar. The dollar pegs contributed to the crisis insofar as they encouraged banks and firms to borrow in dollar from abroad as the exchange rate volatility was low and the risk of exchange rate changes was perceived as low. The build-up of currency mismatches contributed to the vulnerability of financial sectors, which were badly hit once the pegs had to be abandoned during the crisis. However, despite the Asian crisis experience, countries in the region resumed the East Asian dollar standard (McKinnon 2001; McKinnon and Schnabl 2004), even though most countries have since allowed for a bit more flexibility vis-à-vis the dollar.

There are several reasons for the endurance of the East Asian dollar standard. Originally, a major reason for developing East Asian countries to peg their currencies to the dollar was to import macroeconomic stability from the dollar. China, for instance, managed to bring down inflation and stabilise its macroeconomy when it linked the RMB to the dollar in 1994. With today's ultra-lose monetary policy in the US, it is of course hard to claim that a link to the US dollar is a source of stability – which is exactly the reason why central bankers in East Asia are increasingly uncomfortable with the dollar linkages. There are, however, other reasons which have contributed to the durability of the East Asian dollar standard (Volz 2010). Because of close trade and investment relations among East Asian countries relative intra-regional exchange rate stability is an important regional public good. Since all countries in the region (excluding Japan) have stabilised their currencies (to different degrees) vis-à-vis the dollar, the East Asian dollar standard has provided a high degree of intra-regional exchange rate stability in the East Asian region. This has contributed to the development of an extensive regional trade-production network, where intermediate goods are produced, processed and assembled in different locations across the region. This system could not have prospered in an environment of volatile exchange rates, given the usually small profit margins of the subcontracted firms involved in the processing of intermediate goods and components and that the multinationals behind the production fragmentation typically pass on the exchange rate risk to these firms.[6] As can be seen in Figure 2, the share of currencies invoiced in

[5] For recent estimates of the weights of the dollar in East Asian countries' hypothetical currency baskets see Henning (2012).

[6] Empirical analysis by Hayakawa and Kimura (2008), Volz (2010), Tang (2011) and Thorbecke (2011) shows that exchange rate volatility has negative effects on intra-regional trade in the East Asian region, and that volatile

exports of Asian and Pacific countries (excluding Japan) has been constantly above 80 percent, that is, a very large share of the trade within the regional trade-production network is being conducted in dollar.

[Figure 2 about here]

Since East Asian economies, most of which have a strong export orientation, are not only trading partners, but also competitors for exports, exchange rate valuations matter a lot. Managing the exchange rate vis-à-vis the dollar has been a way for East Asian economies to manage the competitiveness of their export sectors. Given that China has continued to link its currency to the dollar (with gradually increasing flexibility), it has been rational for the other countries to also manage their exchange rate against the dollar in order to avoid a loss of competitiveness vis-à-vis China. Through its exchange rate policy, China has therefore set a limit to appreciation of other East Asian currencies.

Furthermore, weakly developed financial markets have led to a high degree of asset and liability dollarisation. Before the Asian financial crisis, most countries in the region had current account deficits, that is, they were importing capital. Because foreign credit was almost exclusively extended in dollars, it was reasonable for central banks to stabilise their currency against the dollar. Since the Asian crisis, most East Asian economies have turned from current account deficit countries to current account surplus countries, i.e., they have turned from debtors to creditors. Because most of their foreign lending is in dollar, it still makes sense to stabilise against the dollar in order to avoid large balance sheet effects in case of exchange rate changes.

As a consequence, the dollar continues to be the preeminent currency across the East Asian region, dominating not only foreign exchange reserves, but also regional payments and financial transactions.

3. RMB internationalisation as a challenge to the role of the dollar?

RMB internationalisation

With the onset of the Global Financial Crisis, which originated in the US financial sector, the Chinese government embarked on an ambitious scheme to reduce dependency of the Chinese economy on the dollar and advance the international use of the RMB. Since 2008, numerous Chinese initiatives have been launched to promote the use of RMB in settling trade and financial transactions and pave the ground for making the RMB an international reserve and investment currency (cf. Table 5 for a timeline of major steps towards RMB internationalisation).

exchange rates are particularly disruptive for trade in parts and components in production networks. Hayakawa and Kimura (2008: 1), for instance, find that "intra-East Asian trade is discouraged by exchange rate volatility more seriously than trade in other regions because intermediate goods trade in production networks, which is quite sensitive to exchange rate volatility compared with other types of trade, occupies a significant fraction of trade."

[Table 5 about here]

Between December 2008 and July 2013, the People's Bank of China (PBOC), China's central bank, has signed bilateral swap agreements with the monetary authorities of 21 countries or jurisdictions (Table 6). Under these currency swap agreements the involved monetary authorities consent to exchange their respective currencies that can be then used to settle bilateral trade. Moreover, a monetary authority that has entered a swap agreement with the PBOC can provide RMB liquidity to its domestic financial institutions in case of a shortage of offshore RMB liquidity – which is important for countries/jurisdictions which want to develop offshore RMB centres, such as Hong Kong, Singapore, the UK or France.

[Table 6 about here]

In April 2009, the State Council announced a pilot programme on RMB cross-border settlement in five cities. The programme commenced in July 2009. It was extended to 20 provinces and to trading partners from all countries in June 2010. In August 2011, cross-border trade settlement in RMB was extended to the whole nation. Initially, trade conducted in RMB could only be settled through designated domestic banks and banks in the offshore markets in Hong Kong. Over time also banks in other countries/jurisdictions (including Singapore, Taiwan and Japan) were allowed to deal with offshore RMB for trade settlements, but for the time being Hong Kong still dominates the market, with a share of about 80% of trade settlement in RMB being conducted through the Hong Kong offshore market at the end of 2012 (Chinn and Ito 2013).

At the end of 2009, the year in which the first cross-border settlement programme was launched, only 0.02 percent of China's total trade was settled in RMB, a share that increased to 6.4 percent by the end of 2010 and rapidly afterwards: by the end of 2011 the share of trade settlement in RMB stood at 8.7 percent and increased further to 14.1 percent by end-2012 (Figure 3). According to SWIFT (2013), 47 countries used the RMB for at least 10 percent of their payments with mainland China and Hong Kong in April 2013. The use of RMB increased also in other areas; in spring 2013 about 12 percent of foreign direct investment into China and about 4 percent of outward direct investment from China were settled in RMB (Yue 2013). Recent estimates by Chinn and Ito (2013) suggest that the role of the RMB as a payments currency should grow further in the coming years, with the share of RMB invoicing for China's exports rising above 25% in 2015 and above 30% in 2018. With non-Chinese resident companies accumulating RMB-denominated export earnings from trade with mainland China, the RMB has also been increasingly used as a deposit currency internationally, with RMB-denominated deposits in Hong Kong having reached RMB 624 billion in January 2013 (Figure 4).

[Figures 3 and 4 about here]

Since January 2007, Chinese and Hong Kong banks are allowed to issue RMB bonds (commonly referred to as "dim sum bonds") in Hong Kong. In September 2009, the Ministry of Finance issued the first sovereign RMB-denominated bond in Hong Kong, and in October 2010 the Asian Development Bank issued the first supranational dim sum bond. In 2012, dim sum bonds were issued in the order of USD 45 billion (Figure 5). In July 2010 the dim sum bond market was deregulated, which led to the development of an RMB offshore market. Even though the offshore RMB bond market has been growing rapidly, with an amount of international RMB-denominated bonds and notes outstanding of USD 58 billion at the end of 2012, the share of RMB-denominated bonds and notes in international debt security markets was less that 0.3 percent (Figure 6). Although data are not publicly available, the amount of RMB held as reserves by central banks is said to be marginal, given the limited convertibility of the RMB (ECB 2103). However, in a 2013 survey among central bank reserve managers, 37 percent said that they would consider investing in RMB within the next five to ten years (Pringle and Carver, 2013).

[Figures 5 and 6 about here]

Can the RMB become a global key currency?

Even though the Chinese policies of RMB internationalisation have increased the RMB's international usage over the past years, its global role is still marginal (cf. Section 2). What are the chances that the RMB will become a global key currency? The literature on international currencies has identified a number of conditions for key currency status,[7] including political stability as precondition for establishing a track record of relatively low inflation and low inflation variability; credible fiscal institutions as basis for a noninflationary monetary environment; a credible monetary regime with strong (*de facto*) independent central bank with clear monetary policy objective to anchor inflationary expectations; a surplus in the trade and current account that helps to create expectations of an appreciation of the national currency;[8] and last but not least the issuing country should have a large economy with a mature financial system since these offer more diversification possibilities than small economies. A currencies' attractiveness increases with transactional liquidity, which is dependent on the existence of well-developed and broad financial markets that are open to foreign investors and offer a wide range of short and long-term investment opportunities and fully operating secondary markets.

For the time being, China certainly does not fulfil all these conditions. In particular, China currently lacks deep and liquid capital markets, the capital account is still tightly regulated and the RMB is not fully convertible. Without a further opening of the capital account and convertibility of the RMB, the latter cannot assume a major international role besides being an

[7] See, for instance, Cohen (2000, 2012a, 2012b) and Dowd et al. (1993).

[8] A current account surplus that generates appreciation expectations is arguably necessary for a currency to become an international key currency. This does not contradict Triffin's (1960) observation that the US needed to run current account deficits in order to provide sufficiently large dollar liquidity for the world economy, which was on a dollar standard under the Bretton Woods system, and that running such current account deficits would eventually undermine the credibility of the dollar. Indeed, the huge current account deficit is nowadays one of the factors that threatens to undermine trust in the dollar, as was the case in the late 1960s and 1970s. Although exchange rate theories are no good at explaining short-term exchange rate movements, it is generally understood that current account deficits are associated with currency depreciation over the medium and long run, and no one is keen to invest in a currency that has a long-term devaluation trend. Hence, for a currency to become a major investment and reserve currency, appreciation expectations are crucial. Once a currency has established itself as a major investment and reserve currency, network effects lend a certain degree of inertia to its international status.

invoicing country in regional trade and a minor reserve and investment currency. But China certainly has the potential to elevate the RMB to key currency status, given its economic size and generally inflation averse leadership. The question is: how long will it take China to carry out financial sector reforms that will create the conditions for the RMB to become a major international currency?

How long will it take?

Theoretically, the necessary policy reforms to boost development of domestic capital markets and liberalise the capital account can be implemented fairly rapidly. Moreover, taking into account the historical experience of the US dollar, which went from having no international role to being the leading international currency in less than a decade (Eichengreen and Flandreau 2012, Eichengreen 2011), we could indeed see the RMB rise to key currency status very quickly, as predicted by Subramanian (2011). But in practice the reform of the capital account and convertibility of the RMB are hotly contested issues in China since these reforms require a fundamental restructuring of the domestic financial sector. Financial sector reform is arguably the single most important reform element that is requisite for China's transformation from a heavily investment-driven economy with a powerful role for state-owned enterprises (SOEs) to an economy with a greater role for private entrepreneurs and domestic consumption.

However, financial market reform, with a liberalisation of the controls over bank lending rates at the core, has far-reaching implications for the distribution of economic rents within China and has been held back by vested interest so far.[9] In short, the ceilings on deposit rates and a floor on lending rates, which have up to now ensured high profit margins for the major (state-owned) banks and enabled local governments and SOEs to obtain cheap credit, had adverse effects for private entrepreneurs which have been starved of credit. Moreover, because of the ceilings on deposit rates the average real return on one-year deposits in Chinese banks have been negative since 2003 (Lardy 2012). As Pettis (2012: 9) puts it, the negative real deposit rates are an implicit "financial repression tax imposed on Chinese households" which depresses consumption, since they reduce households' income from financial investments. The low interest rates have also contributed to the build-up of China's property bubble by causing a much larger allocation of investment into real estate since real returns on property investment have been much higher than those on bank deposits.

The PBOC has long pushed for interest rate liberalisation, while other parts of government, including the powerful National Development and Reform Commission (NDRC), the macroeconomic management agency which is also responsible for SOEs as the "quasi-central planning" agency under the State Council, have been holding back reform. In this context, the PBOC has arguably used the widely popular notion of establishing the RMB as a major international currency that is befitting China's rank in global economics and politics to push

[9] For a more comprehensive discussion of the political economy of financial market reform and RMB internationalisation see Volz (2013).

for reform of the domestic financial markets – which after all is a necessary requirement for successful and complete RMB internationalisation.

Despite laudable attempts at pushing reform, the previous leadership under President Hu Jintao and Premier Wen Jiabao (who in 2007 called the Chinese economy increasingly unsustainable, uncoordinated, unbalanced and unstable) did not succeed in overcoming these vested interests. Some even speak of a "lost decade" for China in terms of reforms (e.g., Johnson 2012). In their first months since taking office in March 2013, President Xi Jinping and Premier Li Keqiang appeared determined to move forward with economic reforms, including those in the financial sector. In contrast to periods of previous economic slowdowns, where banks were ordered by the central government to increase lending, in spring/summer 2013 the Chinese government has repeatedly ruled out fiscal stimulus measures to support the ailing economy whilst calling for a deleveraging of the banking sector and structural reform (e.g., The Economist 2013). And there are signs that this policy is being followed. Indeed, the fact that the PBOC refused to provide short-term cash injections to banks and either deliberately caused or at least accepted a credit crunch in the Chinese interbank market in June 2013 was widely interpreted as an attempt by the PBOC to signal its determination to rein in the credit boom. In a further important move, in July 2013 the PBOC announced to remove the floor on lending rates and allow financial institutions to price loans by themselves, which is a significant step towards interest rate liberalisation. (Before, banks could already lend at 30 percent below the benchmark rate set by the PBOC.) However, the PBOC did not remove the ceiling on deposit rates, which arguably is the most binding interest rate control (Feyzioğlu et al. 2009).[10] Relaxing controls on deposit rates will have much more significant effects on the profitability of banks and the wider economy. How long it takes for interest rate liberalisation to be completed remains to be seen.

Interest rate liberalisation is not only a crucial element of domestic financial market reform, it is also a precondition for the further relaxation of the capital account, which in turn is a precondition for elevating the RMB to key currency status. Although the goal of capital account liberalisation was put forward in the 12th Five-Year Plan outlining the policy for the years 2011-2015, the authorities have provided no details on how quick liberalisation should proceed and how far it should go.[11] In May 2013, Premier Li announced that by the end of the year the government would outline a plan for full capital account convertibility. Although the PBOC is reportedly pushing for full convertibility of the RMB by the end of 2015, chances are that the process of capital account liberalisation will take longer, for two reasons. First, vested interest groups will continue to delay the liberalisation process, and second, liberalising the capital account in times of extreme global liquidity brings about enormous risks for financial stability. A premature deregulation of the capital account before domestic financial reforms are completed can have serious consequences. As pointed out by Gallagher (2013), "[e]very emerging market that has scrapped these regulations has had a major financial crisis and subsequent trouble with growth." The Chinese government is risk-averse,

[10] A modest first step towards liberalising deposit rates was taken in June 2012, when the PBOC allowed banks to pay interest rates up to 10% above the benchmark rates on deposits.
[11] See Gao and Volz (2012) for a discussion of a three-step plan for liberalising the current account over the next ten years made by the PBOC in 2012.

and there is no pressure to liberalise the capital account quickly – especially not at times of an instable world economy and volatile global liquidity flowing in and out of emerging economies. The process of capital account liberalisation is likely to proceed rather step-by-step, in line with the Chinese government's tradition of cautious, gradualist reform. It is therefore rather unlikely that the RMB will be fully convertible and ready to steal the dollar's crown in the short term.

4. Implications for currency co-operation in East Asia

The internationalisation of the RMB has profound implications for the global economy and not least for the other East Asian economies. Although the dollar still dominates global finance, the RMB is clearly gaining in importance, especially in East Asia. As discussed, trade with China is increasingly denominated in RMB, even if for the time being the dollar is still the foremost payments and investment currency in the region.

Most observable is the growing role of the RMB in its effect on the exchange rate policy of East Asian countries. Across East Asia, central bankers have shown little desire to move towards fully flexible exchange rate systems, even if this was the policy recommendation that was given by many Western economists after the Asian crisis. As can be seen in Table 7, only Japan is reported by the IMF as having a freely floating currency. Four other East Asian countries (Indonesia, Korea, the Philippines and Thailand) have their exchange rate arrangement classified by the IMF as floating with an inflation targeting framework, even though it would be more accurate to speak of managed floating guided by the dollar, given that these countries' monetary authorities frequently intervene in the foreign exchange markets to smoothen exchange rate volatility against the dollar. All other countries have some form of stabilised or managed exchange rate.

[Table 7 about here]

As mentioned above, in East Asia relative intra-regional exchange rate stability is an important regional public good. The development of an intricate intra-regional trade-production network was only possible with the relative exchange rate stability that resulted from the East Asian dollar standard. Albeit it is often claimed that the East Asian economies have tied their currencies to the dollar at undervalued exchange rates to promote export growth (e.g. Dooley et al. 2003), the fact that trade with the US accounts for around ten percent of total trade for most East Asian countries – which for several countries is less important than trade with China or the European Union – the importance of the dollar linkages is more that the joint pegging to an external anchor stabilised intra-regional exchange rates. Indeed, maintaining intra-regional exchange rate stability has been a major factor behind the continued linkage to the dollar.

China has been at the centre of the East Asian dollar standard. The progressing internationalisation of the RMB will at some point imply the complete delinking of the RMB from the dollar – and this will effectively bring an end to the East Asian dollar standard. The gradual process of delinking the RMB from the dollar started in July 2005, when the PBOC announced to scrap the dollar peg and instead implement a managed exchange rate regime with reference to a currency basket. After an appreciation of the RMB vis-à-vis the dollar of 21 percent over the course of three years, the dollar peg was reinstalled at the onset of the global financial crisis in July 2008. In June 2010, the PBOC announced that it had "decided to proceed further with reform of the RMB exchange rate regime and to enhance the RMB exchange rate flexibility" (Bloomberg 2010) and subsequently introduced again a bit more flexibility against the dollar. The complete delinking from the dollar may still take some more years – depending on how fast the economic reformers in Beijing will succeed in overcoming opposition to exchange rate liberalisation from the export lobby – but the end of the East Asian dollar standard is in sight.

The question is how the other East Asian countries will respond to the end of China's *de facto* dollar peg. The importance of China adopting a currency basket regime in July 2005 was illustrated by the fact that the Malaysian central bank declared to also adopt a currency basket on the same day that the PBOC made its announcement.[12] Like China, the other East Asian countries have become increasingly uncomfortable with the link to the dollar, and they are basically all waiting for China to progress with exchange rate reform. With China allowing only for very gradual appreciation against the dollar over the period July 2005 to July 2008, China had set the floor of appreciation across East Asia (Ito 2008), providing only limited leeway for the other East Asian currencies to appreciate against the dollar despite large capital inflows and strong appreciation pressure.[13]

Even though it is difficult to disentangle the influence of the dollar from that of the RMB on other East Asian currencies, several studies argue that it is increasingly the RMB and not the dollar any more that is driving currency movements in East Asia (Fratzscher and Mehl 2011; Henning 2012; Subramanian and Kessler 2013). Subramanian and Kessler (2013) already announce the emergence of an "RMB bloc". But there are several reasons why the emergence of an RMB bloc – and a replacement of the East Asian dollar standard by an RMB standard – may not happen. First, China is not the only important economic partner for the other East Asian countries; Japan, the US and Europe are also key trading partners. Linking to the RMB would expose East Asian countries to exchange rate gyrations vis-à-vis the dollar, the yen and the euro. Indeed, the fact that trade is roughly equally distributed with Japan, the US and Europe has been one of the arguments against the dollar peg and in favour of currency basket arrangements that include all these currencies (Williamson 2009; Volz 2011). One of the factors that contributed to the Asian crisis was the strong appreciation of the dollar – and hence also the East Asian currencies that were linked to it – against the yen, which caused a loss of competitiveness of East Asian economies against Japan and contributed to deterioration of these economies' current accounts – which in turn increased the need for capital imports which at some point dried up. Gyrations between the RMB, the dollar and the yen would be problematic if East Asian countries choose to link to the RMB.

Second, the choice of anchor currency is not only an economic decision, but also political factors matter. One of the reasons why the "yen bloc" never really emerged was that the other

[12] The Malaysian central bank was informed about the Chinese move by the PBOC the night before.

[13] See also Pontines and Siregar (2012).

East Asian countries were not willing to accept a Japanese leadership role, neither politically nor economically. Over the past years, a growing fear across the region has developed of Chinese dominance, both political and economic, which has led several East Asian countries to turn more towards the US again and welcome the Obama administration's "pivot to Asia". There is little inclination across the region to trade in US dominance for Chinese dominance.

But with China unlikely to engage in any form of formal regional exchange rate co-operation, and the other East Asian economies unlikely to endorse an RMB bloc, is currency co-operation in East Asia doomed? Not at all. Especially for the ASEAN countries, which are currently working towards an ASEAN Economic Community (AEC),[14] currency co-operation will matter as ever tighter economic integration will require relative intra-regional exchange rate stability. But instead of continuing the practice of (soft) pegging to the dollar or replacing the dollar link with an RMB link, ASEAN countries should look at currency basket regimes as a promising alternative to an RMB bloc.

Currency baskets have several advantages:[15] (i) they help to stabilise the real effective exchange rate instead of the nominal effective exchange rate against just one currency; (ii) there is no need to choose a single anchor currency like the dollar or the RMB; (iii) they allow a gradual adjustments of the composition of currency baskets over time; (iv) undisclosed basket regimes provide no target for currency speculation as do simple currency peg regimes;[16] and (v) they are an effective tool for currency co-operation without need for any formal arrangement.

China and Japan are unlikely to engage in any kind of formal exchange rate stabilisation mechanism, which means that exchange rate fluctuations between these two countries would have a destabilising impact on other East Asian countries that would peg to the RMB (or yen). Currency baskets would enable ASEAN countries and Korea to manage exchange rates of their currency vis-à-vis multiple regional currencies, including the RMB and the yen, as well as extra-regional currencies including the dollar and the euro. No abrupt shift of policies would be needed – Singapore and Malaysia already have currency basket regimes in place, while other countries effectively manage exchange rates against the dollar. These countries could gradually reduce the weight of the dollar in their currency baskets and increase the weight of other currencies (including the RMB, but also the yen and the euro). Furthermore, there would be no need to disclose the composition of baskets or announce a formal exchange rate target; hence, there would be no risk of a speculative attack as would be the case with a fixed exchange rate.

Currency co-operation based on currency baskets would not require any formal or binding agreement. Just like under the East Asian dollar standard, which has also been an implicit, informal form of exchange rate co-operation, East Asian countries could individually manage

[14] In 2003, the ASEAN leaders declared the goal of creating an ASEAN Economic Community with a free movement of goods, services, investment, skilled labour and a freer flow of capital by 2020. In 2007, the leaders decided to advance the creation of the ASEAN Economic Community to 2015 and agreed on the *ASEAN Economic Community Blueprint* (ASEAN Secretariat 2008).
[15] See Ito (2007), Williamson (2009) and Volz (2010; 2011).
[16] A managed exchange rate guided by an undisclosed currency basket provides no room for a riskless one-way-bet as do currency pegs.

their exchange rates. Because the trade orientation of East Asian countries is relatively similar, basket weights based on the importance of bilateral trade flows would also be relatively similar for the East Asian countries.[17] Simulations show that currency basket arrangements based on individual countries' trade weights would deliver a high degree of real effective exchange rate stability – higher actually than under the prevailing East Asian dollar standard – and bring about relatively homogeneous exchange rate policies across the region (Volz 2010).

A region-wide move towards managed exchange rates guided by currency baskets is being helped by the fact that China herself is moving in this direction. Indeed, the fact that China reinstalled the dollar peg in the period July 2008 to June 2010 effectively hindered the other East Asian countries to loosen their currency linkages to the dollar. But with China gradually moving away from the dollar again since June 2010, the room for a region-wide adoption of informal, managed exchange rate regimes guided by currency baskets is widening.[18]

Currency co-operation in East Asia is improbable to follow the European approach, where intra-regional exchange rates were formally fixed against each other in the European Monetary System. The political requirements to maintain such a system would be too high for East Asian countries, as would be the risk of a speculative attack (Volz 2006). But freely floating exchange rates across East Asia are just as unlikely. Instead, the East Asian countries with the exception of Japan can be expected to engage in informal currency co-operation, where their exchange rate policies are guided by relatively similar undisclosed basket regimes. Of course, the composition and weights of different currencies in countries' individual currency baskets could be harmonised over time if closer monetary integration is sought, but this need not be the case. What is most likely to develop over the coming years is a loose and informal form of exchange rate co-operation among East Asian countries that allows for sufficient flexibility for each and every country but that will deliver the same degree of intra-regional exchange rate stability that was a result of the East Asian dollar standard. The RMB will be one important component in the currency baskets of its neighbours, and its share in these baskets is likely to grow over time, but it will not be the only component currency.

5. Conclusion

This paper looked at the internationalisation of the RMB and discussed its implications for regional currency co-operation in East Asia. For the time being, the dollar still dominates global and East Asian markets. But the RMB internationalisation policy that started in 2008 has already led to a growing role of the RMB especially in payments in the East Asian region,

[17] Volz (2011) points out that the composition of currency baskets should not only be based on trade weights but also take into account the currency denomination of an economies' international assets and liabilities.

[18] On a side note, Joseph Yam (2012), the former head of the Hong Kong Monetary Authority (HKMA) suggested that Hong Kong may abandon its long-standing currency peg to the dollar and instead manage the Hong Kong dollar against a basket of currencies. Although the HKMA dismissed this proposal (cf. Bloomberg 2012), it is rather unlikely that Hong Kong will keep the dollar peg when mainland China eventually abandons it since exchange rate volatility would negatively affect the close trade and financial linkages between Hong Kong and mainland China.

as well as globally. Overall, the RMB clearly has the potential to become a regional and global lead currency, but to establish the RMB as an international investment and reserve currency, the Chinese authorities will have to continue reform of the Chinese financial sector and liberalise the capital account. The speed of RMB internationalisation will hence depend on the *internal* political economy that will set the pace for reforms in the Chinese financial sector and for capital account liberalisation. Contingent on the speed of Chinese financial sector reforms and capital account liberalisation, as well as the development of the Chinese economy and on whether China will act as a responsible actor in the multilateral (financial) system, the RMB may well become one of the global key currencies, along with the dollar and the euro, in the next ten to twenty years. But even if there has been a lot of speculation about the RMB replacing the dollar as world currency, it is unlikely to see the dollar fall into obscurity – the fate of the dollar will not least depend on the Fed's capability to secure long-term monetary and financial stability and the US government's ability to address its fiscal problems. Given the competition from other currencies including the RMB, the dollar's role is likely to decline over the next decades. But it will be much more likely to see the development of a multipolar currency system with the dollar, the euro and the RMB as the global key currencies, rather than a system that is dominated by only one currency as was the case over the past century.

Given the great importance of the Chinese economy and its central role in the East Asian trade-production network, the internationalisation of the RMB will have a profound impact on the other East Asian countries. As part of its internationalisation, the RMB will be gradually delinked from the dollar, which will effectively put an end to the East Asian dollar standard that has shaped the region's financial architecture over the last three decades and that has provided a relatively high degree of intra-regional exchange rate stability. Because of the close trade and investment ties that have developed across the region, the East Asian countries, especially the ASEAN countries which are striving to create an ASEAN Economic Community, will continue to manage their exchange rates and stabilise their currencies against one another to facilitate cross-border investment and commerce. But instead of a replacing of the dollar standard with an RMB standard we are likely to see some rather loose and informal exchange rate co-operation in East Asia based on currency baskets. China herself is moving towards a managed exchange rate system guided by a currency basket. Because of similar trade orientations of East Asian countries, exchange rate policies guided by trade-weighted baskets of foreign currencies would yield a relatively high degree of intra-regional exchange rate stability without need for any formal co-operation. The RMB can be expected to gain considerable weight in the currency baskets that will guide the exchange rate policies of its neighbours, but other currencies from within and outside the region will also play a role in these baskets.

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Table 1: Currency distribution of global foreign exchange market turnover (Percentage shares of average daily turnover in April)

Currency	**1998**	**2001**	**2004**	**2007**	**2010**	**2013**
US dollar	86.8	89.9	88.0	85.6	84.9	87.0
Euro	...	37.9	37.4	37.0	39.1	33.4
Japanese yen	21.7	23.5	20.8	17.2	19.0	23.0
Pound sterling	11.0	13.0	16.5	14.9	12.9	11.8
Australian dollar	3.0	4.3	6.0	6.6	7.6	8.6
Swiss franc	7.1	6.0	6.0	6.8	6.4	5.2
Canadian dollar	3.5	4.5	4.2	4.3	5.3	4.6
Mexican peso	0.5	0.8	1.1	1.3	1.3	2.5
Chinese renminbi	0.0	0.0	0.1	0.5	0.9	2.2
New Zealand dollar	0.2	0.6	1.1	1.9	1.6	2.0
Other currencies	66.2	19.5	18.8	23.9	21.0	19.7
All currencies	200.	200.0	200.0	200.0	200.0	200.0

Source: Compiled by author with data from the BIS Triennial Central Bank Surveys of Foreign Exchange and Derivatives Market Activity.
Note: Because each transaction involves two currencies, the shares sum to 200 percent.

Table 2: Outstanding cross-border loans vis-à-vis non-banks by currency (in percentage of outstanding of total amounts)

	US dollar	Euro	Yen	Pound sterling	Swiss franc	Other	Unallocated
1998	42.18	29.78	8.12	3.46	2.22	3.83	10.40
1999	43.05	31.00	8.34	3.45	2.20	4.16	7.79
2000	44.87	31.90	7.58	3.61	2.04	4.55	5.46
2001	46.75	32.75	6.77	3.98	1.73	3.76	4.27
2002	43.81	37.46	5.33	4.38	1.77	3.66	3.59
2003	40.81	40.50	5.62	4.23	1.71	4.11	3.03
2004	38.83	42.14	5.89	4.52	1.61	4.38	2.63
2005	41.72	39.08	5.30	4.68	1.46	4.86	2.90
2006	43.50	37.08	4.30	5.37	1.47	5.55	2.73
2007	42.07	37.93	4.19	5.34	1.43	6.28	2.76
2008	41.34	39.15	4.39	4.51	1.39	5.98	3.23
2009	41.19	38.78	3.51	4.72	1.31	7.13	3.35
2010	43.45	34.27	4.54	4.70	1.38	7.62	4.03
2011	44.05	32.43	5.38	4.61	1.24	7.60	4.68
2012	43.17	32.80	5.06	4.66	1.20	8.04	5.07

Source: Compiled by author with data from the BIS Locational Banking Statistics (BIS Quarterly Review, June 2013, Table 5B: Currency Breakdown Reporting banks' cross border positions vis-à-vis non-banks).

Table 3: International bonds and notes, amounts outstanding by currency

	December 2011		December 2012		March 2013	
	In billion of USD	**% of total issue**	**In billion of USD**	**% of total issue**	**In billion of USD**	**% of total issue**
Total issues	20,207.0	100.00	21,081.2	100.00	20,672.3	100.00
Euro	9,586.9	47.44	9,331.8	44.27	9,140.8	44.22
US dollar	6,640.5	32.86	7,208.2	34.19	7,371.3	35.66
Pound sterling	1,905.5	9.43	1,959.2	9.29	1,895.7	9.17
Yen	741.9	3.67	645.4	3.06	563.6	2.73
Swiss franc	380.8	1.88	380.0	1.80	353.2	1.71
Australian dollar	304.9	1.51	323.2	1.53	322.1	1.56
Canadian dollar	311.5	1.54	287.0	1.36	281.4	1.36
Swedish krona	101.0	0.50	122.1	0.58	125.7	0.61

Source: Compiled by author with data from the BIS Debt Securities Statistics (BIS Quarterly Review, June 2013, Table 13.B).

Table 4: Share of currencies in global payment as of May 2013 (in %)

Currency	Share
Euro	37.46
US dollar	36.52
British pound	7.96
Japanese yen	2.43
Australian dollar	2.11
Canadian dollar	1.84
Swiss franc	1.60
Singapore dollar	0.99
Swedish krona	0.98
Thai baht	0.97
Hong Kong dollar	0.97
Norwegian krone	0.86
Chinese RMB	0.84
Russian ruble	0.62
Danish krone	0.46
Other currencies	3.39
Sum	100.00

Source: Compiled by author with data from SWIFT (RMB Monthly Tracker June 2013, http://www.swift.com/products_services/renminbi_reports).

Table 5: Timeline of major steps towards RMB internationalisation

November 2002. Qualified Foreign Institutional Investors (QFII) can buy and sell RMB denominated shares in China's mainland stock exchanges, licensed by China Securities Regulatory Commission (CSRC). QFII investors need to obtain investment quotas from China's foreign currency regulator (SAFE) before they can start buying Chinese securities.
February 2004. Retail RMB business starts in Hong Kong and Macau (following permission given in November 2003). The PBOC provides clearing arrangement for relevant banks in Hong Kong and Macau via Bank of China Hong Kong and Macau.
October 2005. First two RMB-denominated bond from a non-Chinese issuer ("Panda bonds") are sold in mainland China by the International Finance Corporation and the Asian Development Bank.
January 2007. RMB bonds (also known as "dim sum bonds") can be issued in Hong Kong.
July 2007. First dim sum bond issued by China Development Bank.
December 2008. Currency swap with South Korea.
December 2008. Premier Wen announces a pilot scheme of RMB cross border trade settlement with Hong Kong, Macau and ASEAN countries.
April 2009. State Council announces pilot program on RMB cross-border settlement in five cities.
April 2009. First cross border trade settlement between Shanghai Silk group (China exporter) and Zhong Ye Trading (Hong Kong importer).
June 2009. PBOC and HKMA sign memorandum of co-operation for RMB cross-border trade settlement pilot scheme.
July 2009. PBOC and other five authorities issued administrative rules for RMB settlement pilot scheme with HK, Macau and ASEAN countries.
July 2009. Launch of the pilot scheme for RMB cross border trade settlement between Mainland Designated Enterprises (MDEs) in five cities (Shanghai, Guangzhou, Shenzhen, Dongguan and Zhuhai) and corporations in Hong Kong, Macau and ASEAN countries.
September 2009. Ministry of Finance issues the first sovereign RMB-denominated bond in Hong Kong.
November 2009. Interbank Market Clearing House is founded in Shanghai.
March 2010. PBOC and the National Bank of Belarus sign local-currency settlement agreement, the first of its kind with a non-neighbouring country.
May 2010. Rules for issuance of Panda bonds are liberalised and more issuers are allowed. Bank of Tokyo-Mitsubishi UFJ (China) Ltd. is the first foreign bank to sell bonds in China.
June 2010. RMB trade settlement program is extended to 20 provinces and to trading partners world-wide.
June 2010. RMB bonds extended to allow banks to develop all types of RMB products and open type of participation to all types of financial intermediaries.
July 2010. Bank of China (Hong Kong) authorised to clear RMB bank notes in Taiwan.
July 2010. Hong Kong financial institutions allowed to open RMB accounts.
July 2010. Hopewell Highway issues the first corporate RMB-denominated bond in Hong Kong.
August 2010. First offshore RMB mutual fund is started.
August 2010. Qualified financial institutions (overseas central banks, cross border settlement banks, RMB clearing banks) can invest in China's interbank bond market.
September 2010. First foreign-issued dim sum bond by a nonfinancial company (McDonald's) in Hong Kong.

October 2010. Overseas institutions allowed to apply for RMB accounts for trade settlement.
October 2010. Pilot project for deposits of export proceeds abroad launched in four areas.
October 2010. Asian Development Bank issues first supranational Dim Sum bond.
December 2010. Trade settlement scheme expanded; number of Chinese exporters eligible for cross-border settlement (MDEs) rises from 365 to 67,359.
January 2011. PBOC announces a pilot scheme under which residents of 20 provinces and cities are allowed to use RMB for outward FDI.
January 2011. Bank of China allowed to offer RMB deposit accounts in New York City.
April 2011. First RMB IPO by Hui Xian, listed on the Hong Kong Exchange.
August 2011. Cross-border trade settlement in RMB is extended to the whole nation.
August 2011. Initial RMB 20bn Mini-QFII Program launched.
September 2011. At the UK-China Economic and Financial Dialogue Vice Premier Wang Qishan and British Chancellor of the Exchequer George Osborne agree on a co-operation project on the development of RMB-denominated products and services in London and welcome a private sector-led development of the offshore RMB market in London.
October 2011. Banks are allowed to provide settlement services to overseas entities that made RMB denominated investments.
November 2011. JP Morgan Asset Management is allowed to create a $1bn RMB-denominated fund under the Qualified Limited Partners Program, making it the largest foreign manager of an RMB-denominated fund so far.
December 2011. China and Japan sign currency pact to promote use of their currencies for bilateral trade and investment flows.
January 2012. Shanghai city government and National Development and Reform Commission outline a plan for developing the size of the city's capital markets and open them more widely to foreign investors by 2015.
April 2012. China Securities Regulatory Commission announces an expansion of the QFII scheme from the previous limit of $30bn to $80bn and increases the total amount of RMB that foreign investors can raise in Hong Kong for investment on the mainland from RMB20bn to RMB70bn.
April 2012. HSBC issues a three-year RMB-denominated bond in London, the first so-called dim sum bond to be issued outside China and Hong Kong.
June 2012. Announcement of plans to create a special zone to experiment with currency convertibility in Shenzhen.
November 2012. First Chinese Bank (China Construction Bank) issues RMB-denominated bond in London.
January 2013. Qianhai, a special zone located in the western part of Shenzhen, is allowed to launch China's first cross-border RMB lending programme (with Hong Kong). 15 banks in Hong Kong – nine branches of mainland lenders and six foreign banks – sign $320m RMB loans to Chinese mainland firms relating to 26 projects registered in Qianhai.
May 2013. The State Council announces that by the end of the year the government would outline a plan for full convertibility of the RMB.
July 2013. The State Council announces the intention to establish a pilot zone in Shanghai as a test ground for financial reforms, including interest rate liberalisation and full convertibility of the RMB.

Source: Compiled by author drawing from SWIFT (2011), Prasad and Ye (2012) and various public and media sources.

Table 6: Bilateral swap agreements with other countries/jurisdictions (as of July 2013)

Country/jurisdictions	Amount (in billion RMB)	Date of agreement	Expiration date
Argentina	70	March 2009	March 2012
Australia	200	March 2012	March 2015
Belarus	20	March 2009	March 2012
Brazil	190	March 2013	March 2016
France		Under preparation	
Hong Kong	200 400	January 2009 November 2011	January 2012 November 2014
Iceland	3.5	June 2010	June 2013
Indonesia	100	March 2009	March 2012
Kazakhstan	7	June 2011	June 2014
Korea	180 360 360	December 2008 October 2011 June 2013	December 2011 October 2014 October 2017
Malaysia	80 180	February 2009 February 2012	February 2012 February 2015
Mongolia	5 10	May 2011 March 2012	May 2014 May 2014
New Zealand	25	April 2011	April 2014
Pakistan	10	December 2011	December 2014
Russia	Local currency settlement agreement, no limitation	June 2011	
Singapore	150 300	July 2010 March 2013	July 2013 March 2016
Turkey	10	February 2012	February 2015
Thailand	70	December 2011	December 2014
United Arab Emirates	35	January 2012	January 2015
United Kingdom	200	June 2013	June 2016
Ukraine	15	June 2012	June 2015
Uzbekistan	0.7	April 2011	April 2014

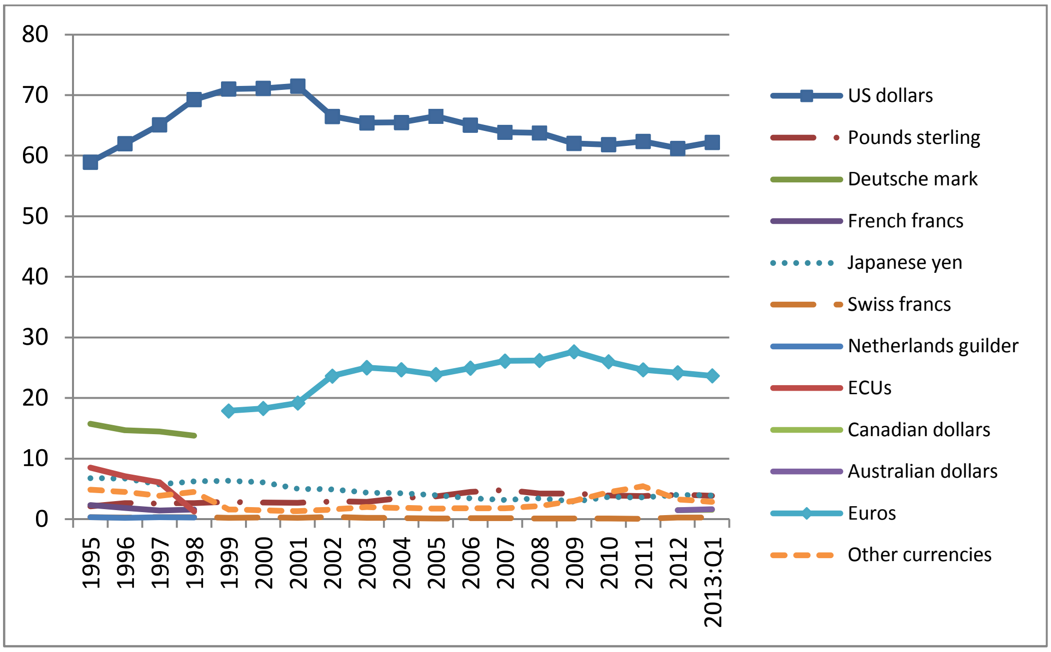
Source: Compiled by author with enhanced and updated data from Garcia-Herrero and Xia (2013).

Table 7: The IMF's *de facto* classification of exchange rate arrangements

Country	**Currency regime**
Brunei Darussalam	Currency board (vis-à-vis Singapore dollar)
Cambodia	Stabilised arrangement (vis-à-vis US dollar)
China	Crawl-like arrangement*
Indonesia	Floating (with inflation targeting framework)
Japan	Free floating
Korea	Floating (with inflation targeting framework)
Lao	Stabilised arrangement*
Malaysia	Other managed arrangement
Myanmar	Other managed arrangement
Philippines	Floating (with inflation targeting framework)
Singapore	Other managed arrangement (composite exchange rate anchor)
Thailand	Floating (with inflation targeting framework)
Vietnam	Stabilised arrangement*

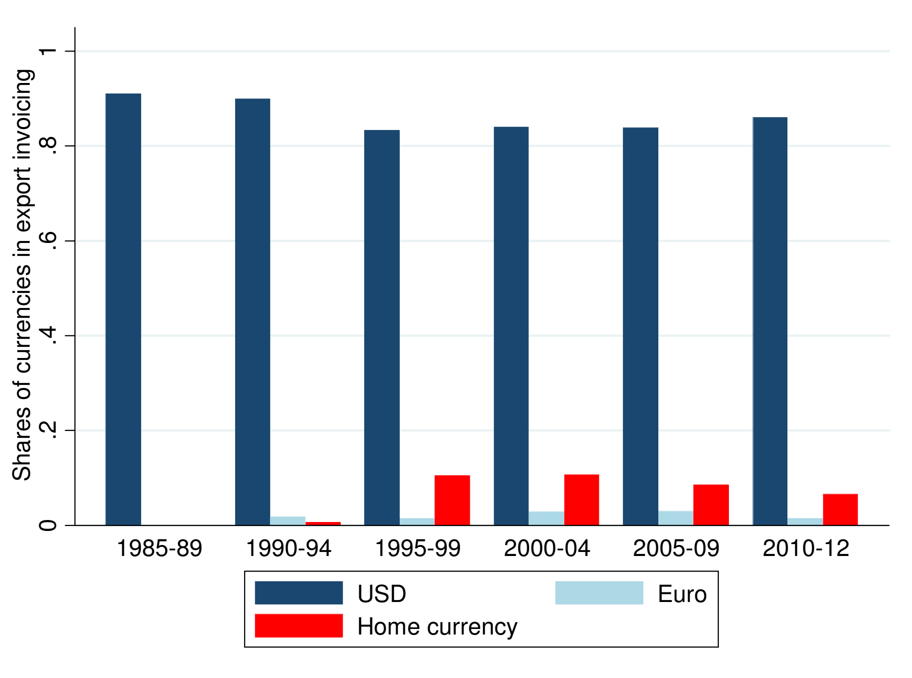
Notes: * The de facto monetary policy framework is an exchange rate anchor to the US dollar.
Source: Compiled by author based on information extracted from IMF (2012), Table 1 "De Facto Classification of Exchange Rate Arrangements and Monetary Policy Frameworks, April 30, 2012".

Figure 1: Currency composition of official foreign exchange reserves (in %)



Source: Compiled by author with data from the IMF COFER database (last updated: 28 June 2013).

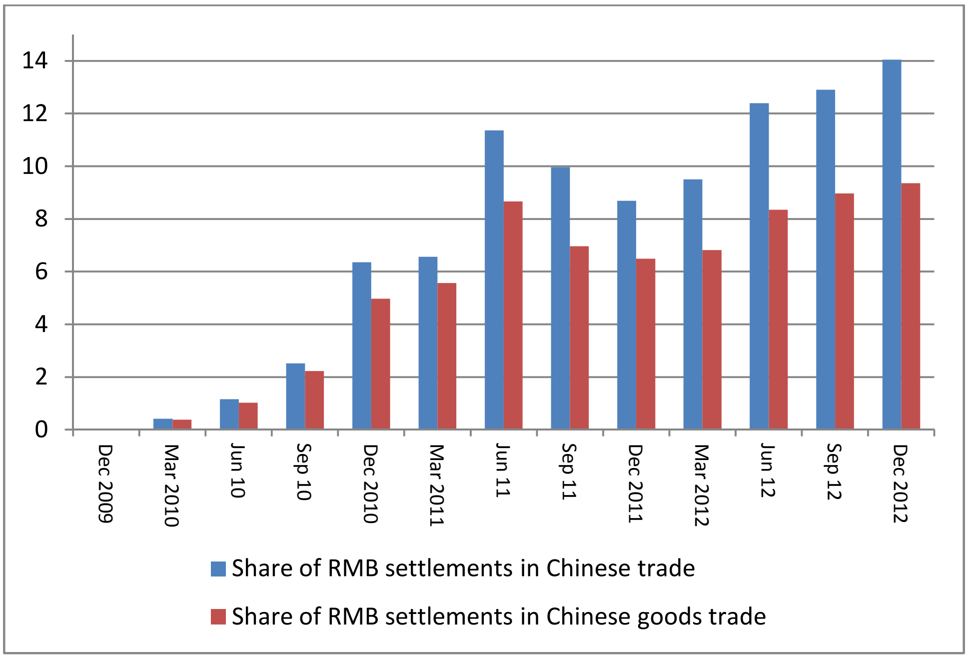
Figure 2: Share of currencies invoiced in exports of Asian and Pacific countries excluding Japan (in percent)



Note: The countries in this subsample are Australia, China, India, Indonesia, Korea, Malaysia, Pakistan and Thailand.

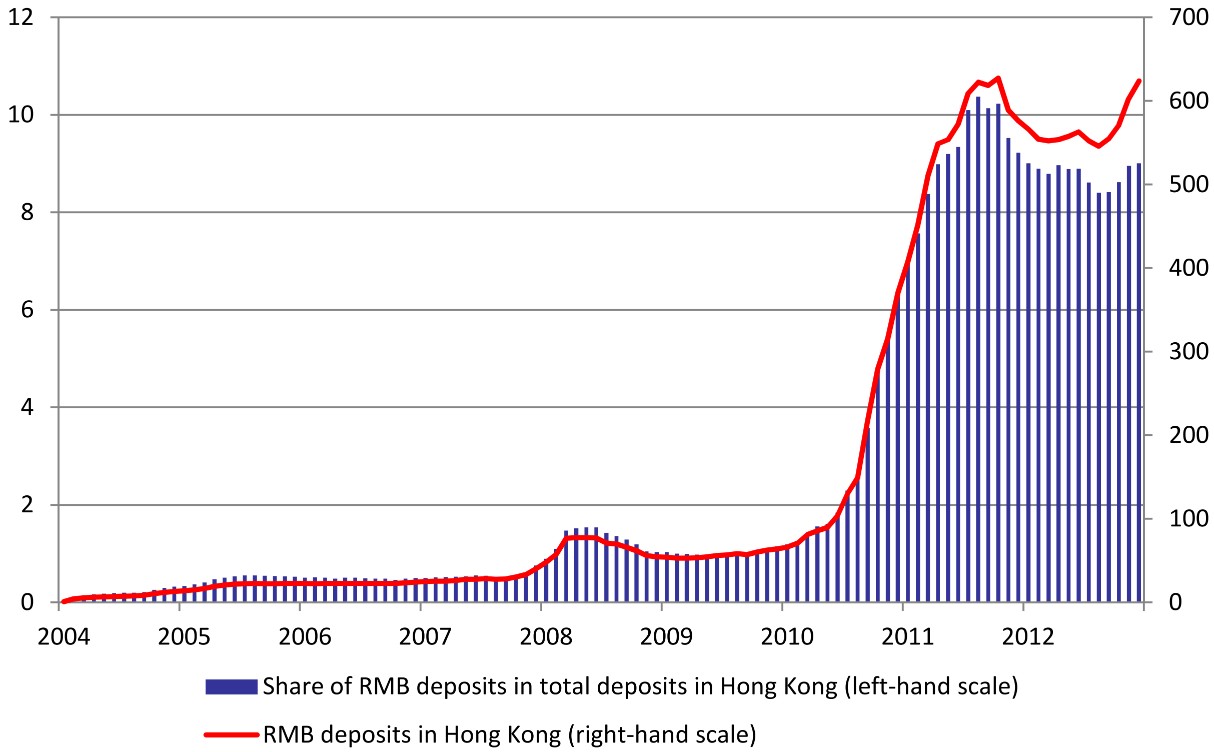
Source: Chinn and Ito (2013), Figure 3-2.

Figure 3: Share of RMB-denominated settlements in China's trade (in percent)



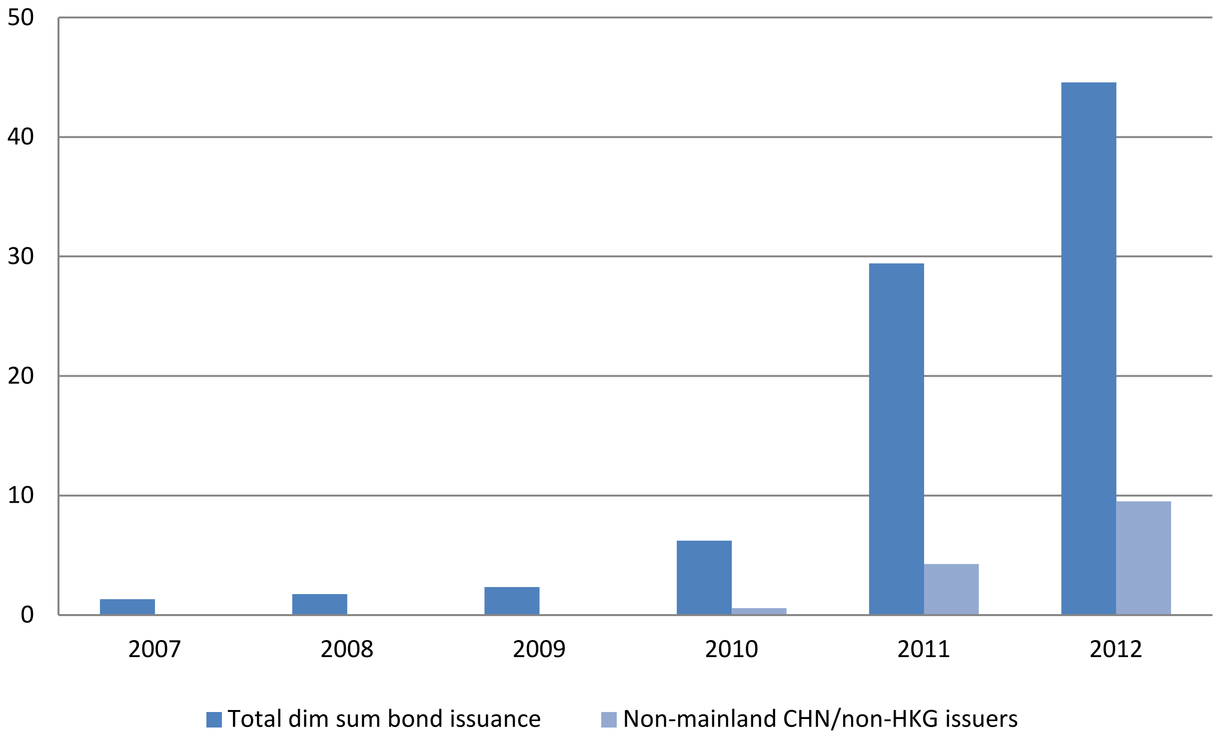
Source: Compiled by author with data from the PBOC (Annual Report, various issues).

Figure 4: RMB-denominated deposits in Hong Kong (in billion RMB and percent)



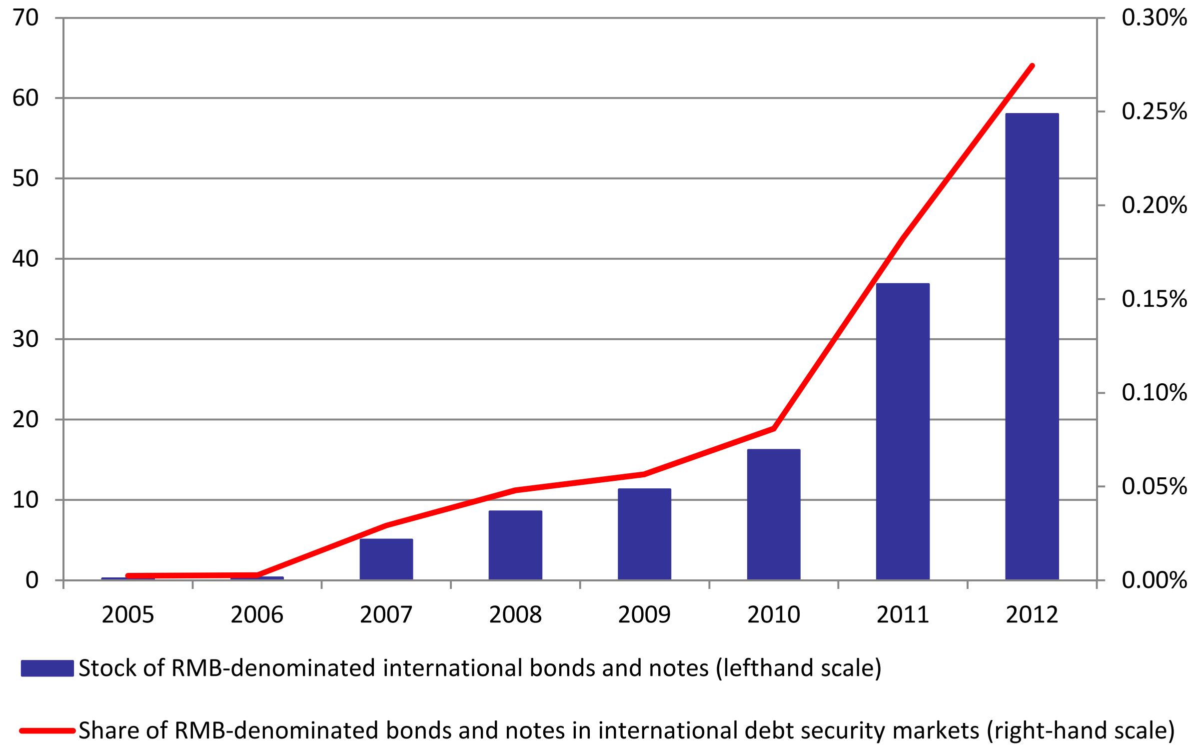
Source: Compiled by author with data from the Hong Kong Monetary Authority's Monthly Statistical Bulletin (http://www.hkma.gov.hk/eng/market-data-and-statistics/monthly-statistical-bulletin/table.shtml).

Figure 5: Issuance of dim sum bonds (in USD billion)



Source: Compiled by author with data from Bloomberg.

Figure 6: Amount of international RMB-denominated bonds and notes outstanding (in billion USD; as percent)



Source: Compiled by author with data from BIS Debt Securities Statistics.

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