The Internationalisation path of the RMB

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I. Introduction

As China's position in the world economy strengthens, it is becoming all the more apparent that it is not matched by China's standing in the international monetary system or by the importance of the renminbi (RMB) on the global stage. This raises a number of questions about the implications of the deep-rooted changes for the monetary system implied by China's rise. There is a general academic consensus on the benefits of issuing a global reserve currency, although more recently this has been questioned (Bergsten, 2009; Truman, 2007) or refined (Gourinchas, Rey and Govillot, 2010). However, the general intuition is still that there are inherent gains linked to being able to issue a reserve currency, which generally yields substantial dividends in alleviating the cost of trading and the cost of funding, and which tends to improve the ability of a country to manage its net international investment position and the associated balance-sheet effects.

It is therefore natural to expect that China would, over time, seek to capture some of these benefits by internationalising its own currency and playing a role in the international monetary system commensurate with its economic power. In fact, evidence suggests that in recent years and especially since the 2008 crisis, Chinese authorities have taken a number of significant steps in this direction. However there is considerable uncertainty, and a vivid academic debate over what is exactly happening and about the course, pace and obstacles along the internationalisation path of the RMB.

This paper first factually describes how China has and slowly continues to establish its currency on the international stage. We analyse the most recent set of measures taken in the aftermath of the crisis and their contribution to enhancing the RMB's potential as an international currency. We then propose a roadmap that challenges the current conventional wisdom looking at the sequencing and timing needed to achieve a successful internationalisation. In particular, we dispute the idea that the RMB cannot establish itself as an international currency if China does not concede on: (i) the flexibility of the exchange rate; (ii) the convertibility of the capital and financial account; and (iii) the opening of the domestic financial sector to enhanced foreign participation. We believe that this consensus and the way it frames the debate overlooks several important factors to which we have decided to give more space in this research: (i) the political economy of the currency

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[2] The background work is related to a study on the International Monetary System commissioned by the European Commission to Bruegel and the CEPII in 2011, and it is presented for the first time at the Asia Europe Economic Forum in Seoul, Korea in December 2011.

flexibility question in China; (ii) the effective possibility of achieving a considerable degree of internationalisation despite a relatively closed or controlled financial account through the expansion of the offshore market; (iii) the relevance/necessity of the openness of the financial sector for the purpose of effective capital allocation and domestic financial stability.

We conclude by suggesting that the RMB has a strong potential to reach the internationalisation status of the yen, the sterling pound or the Swiss franc in the next few years through organic forces with relatively small changes to the current policy framework. However, we identify significant medium to long-term policy challenges for China if it truly intends for the RMB to reach the internationalisation status of the dollar or the euro. One of those challenges, for instance, is the regional role of the RMB as a stepping-stone towards its establishment as an international currency, for which the euro experience provides both a model and a test case.

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II. Planting the seeds of the RMB as an international currency

The literature on what constitutes an international currency is vast but generally reaches a consensus on three essential functions of a global currency: its use as a medium of exchange, as a store of value and as unit of account. These three functions are then assessed differently for official and private actors but they can be quantitatively measured through a number of proxy variables although the definitive judgement over what makes a reserve currency is actually far more subjective. The current global currency map is presented in Benchmark for internationalisation of the RMBTable 1. It can be characterised by essentially one hegemon (the dollar), a challenger (the euro) and three second-tier contenders with no real ambition or ability to raise their status to that of the first two. The renminbi is so far absent from this picture but this could change relatively rapidly.

Table 1: Benchmark for internationalisation of the RMB

Percent	EUR	USD	JPY	GBP	CHF	Other/Unallocated
Share in World Trade (euro area)	14.5	12.3	5.6	3.3	1.3	62.9
Share in World GDP ppp (euro area)	14.6	19.7	5.8	2.9	0.4	56.5
Share in Global Cross-Border Deposits	22.5	59.2	2.1	-	-	16.2
Share in International Debt Outstanding	31.4	45.8	5.8	7.4	3.6	6.1
Share in Global FX Transactions*	39.1	84.9	19.0	12.9	6.4	37.8
Share in Global Reserves	14.5	33.9	2.1	2.2	0.1	47.3

Source: ECB, Annual Report on International Role of the euro (2010), IMF (COFER, WEO, DOTS), BIS.

* Sum of those shares adds up to 200 percent as there are two currencies involved in an FX transaction

There is a debate about what makes a reserve currency and if these characteristics are attainable to all economies. Although the simplification is tempting, it is not clear if currencies rise and fall on the global stage as a mere reflection of the strength of the underlying economy or if there are other contributing factors. Essentially, the question is whether, outside of sheer economic might, policymakers can influence this process or whether it is largely an organic process outside of their control. Evidence is mixed. There are examples of currencies turning out to be reserve currencies despite the irrelevance of the underlying economy and the absence of policy strategy to that effect (Canada and increasingly Australia today for instance). But there are also experiences of failed activist internationalisation attempts such as that of Japan in the 1980s. Finally, the euro provides an example of an accidental reserve currency, one for which policymakers officially did not aim for reserve status as an explicit policy objective, but which still ended up more or less there. Of all these possibilities, it is unclear what the renminbi will turn out to be. Subramaniam (2011) or Eichengreen (2011) argue that the renminbi will undoubtedly come to challenge the dollar as the central reserve currency in the next few years but very much the same could have been said of the yen in the late 1980s or the euro in the late 1990s. The internationalisation process of any currency is tricky and tortuous.

1. International trade and the RMB

Internationalisation through trade is certainly the most obvious path for China whose international trade represent (29.4 percent of its current dollar GDP, 10.5 percent of world exports and an aggregate USD 2.9 trillion in international trade in 2010 according to the IMF). This would also be more consistent with China's existing degree of balance-of-payments controls, which are more geared towards the financial account while the current account is far more open. Although trade is a natural vector for currency internationalisation, it is not a self evident one, other large exporters or trading states do trade in other currencies than their own. Commodity exporting countries are a prime example but others saw their share in the global economy and in particular in global trade rise without a proportionate rise of their currency in international trade. The yen is a good example of a currency whose place in international trade grew much more modestly than its share in world trade or in world GDP or despite a fairly activist internationalisation policy that did not manage to raise the amount of yen invoicing above 49 percent of its exports and 25 percent of its imports at its peak, and which contributed to the failure of the internationalisation experience of the yen (Kaway and Takagi, 2010).

i. Pilot scheme of RMB cross-border trade settlement

The RMB started to be used outside China in the late 1990s, in Hong Kong in particular. Hong Kong banks developed some settlement capacity as early as 2005. But these were relatively marginal developments until more recent initiatives. The most significant Chinese trade settlement initiative is known as the '*cross border trade settlement pilot scheme*'. It was introduced in April 2009, and gave rise to a Memorandum of Understanding between the Hong Kong Monetary Authority (HKMA) and the People’s Bank of China (PBoC) in June 2009. The PBoC effectively launched it when it promulgated The *Administrative Rules for the Pilot Scheme for Settlement of Cross-border Trade in RMB* in July 2009. The PBoC and other mainland agencies govern the arrangement and it has already evolved and been expanded considerably since its inception.

In essence the pilot scheme allows local exporting enterprises in the pilot areas to export and settle in RMB. Applications to become a pilot enterprise have to be reviewed by the PBoC and local authorities[3]. Local enterprises in the pilot areas that provide cross-border service (such as settling banks) need to register their corporate information with the PBoC.

Mainland designated enterprises under the Pilot Scheme have to be granted approval by the central authorities on the recommendation of their respective provincial governments. No specific eligibility requirements have been set for the enterprises outside the Chinese mainland to participate in the Pilot Scheme, although there is a strong emphasis that all trade settlements in RMB should have a genuine trade purpose with the mainland designated enterprises.

Initially, the Pilot Scheme only covered five mainland cities (Shanghai, Guangzhou, Shenzhen, Dongguan and Zhuhai), Hong Kong, Macau and the ASEAN[4] member countries. In June 2010, the scope of the scheme was expanded to 20 provinces/cities on the mainland (Beijing,

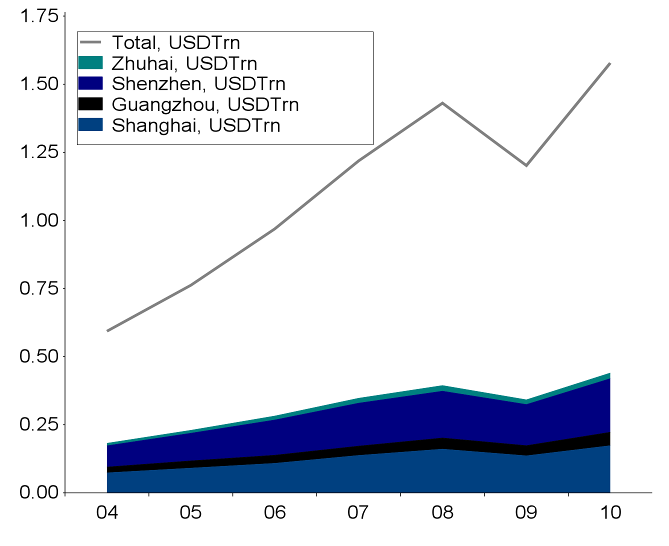
[3] The Ministry of Finance, Ministry of Commerce, General Administration of Customs, State Administration of Taxation and China Banking Regulatory Commission.

4 ASEAN, the Association of Southeast Asian Nations, consists of the following 10 countries, namely, Singapore, Indonesia, Malaysia, Philippines, Thailand, Vietnam, Cambodia, Laos, Brunei and Myanmar.

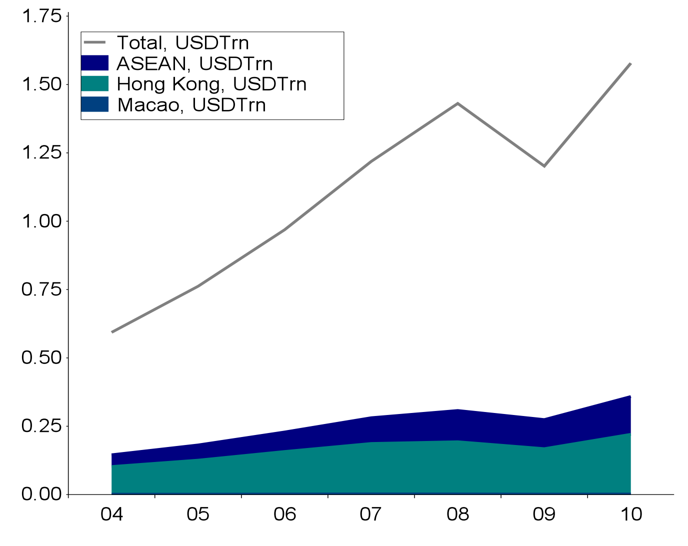
Tianjin, Inner Mongolia, Liaoning, Jiangsu, Zhejiang, Fujiang, Shangdong, Hubei, Guangdong, Guangxi, Hainan, Chongqing, Sichuan, Yunnan, Jilin, Heilongjiang, Tibet, Xinjiang)[5] and no geographical limitations were given outside of the mainland, effectively expanding the pilot from a regional (ASEAN) project to a global one.

Figure 1: Trade covered by phase 1 of the Pilot Scheme

Exports covered relative to total Chinese Exports



Imports covered relative to total Chinese Exports



Source: National Bureau of Statistics of China

Note: *Data for the city of Dongguang (China's 20th largest city in the region of Guangdong) is not available at the NBERC but given its GDP is about 0.6 percent of China's GDP we can consider its contribution to total exports is considerably smaller than the four other cities in the phase 1 of the pilot*.

According to the PBoC, this pilot initially involved 365 firms on the mainland approved by the authorities (Ministry of Finance, the Ministry of Commerce, the General Administration of Customs, the State Administration of Taxation, the CBRC and the PBoC). With the expansion, some 67,000 firms were approved. By the end of 2010, the scheme had given rise to RMB 340 billion, or about seven times the amount achieved the first year under the phase I of the pilot.

Table 2: The Trade Settlement Pilot Scheme: key facts

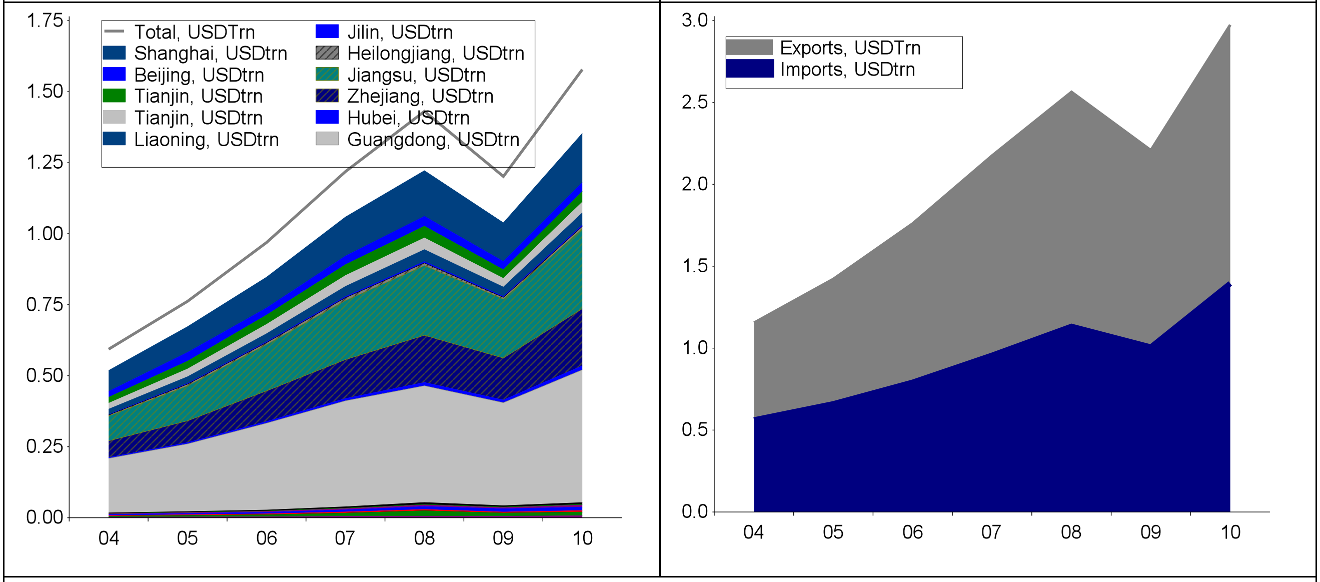
Scope	Mainland	Outside of Mainland	Potential Coverage
Phase 1 (from July 1st, 2009)	Shanghai, Guangzhou, Shenzhen, Dongguan and Zhuhai	ASEAN, Special Administrative Regions (Hong Kong, Macao)	▪ 28% of Chinese Exports ▪ 16.8% of Chinese Imports ▪ USD 100bn Annual Transactional Turn Over
Phase 2 (from June 22nd, 2010)	Beijing, Tianjin, Inner Mongolia, Liaoning, Shanghai, Jiangsu,	International	▪ 96% of Chinese Exports ▪ 100% of Chinese

5 Note that there are 34 provinces in China and that the 20 chosen regions represent about 58% of the total Chinese population.

	Zhejiang, Fujiang, Shangdong, Hubei, Guangdong, Guangxi, Hainan, Chongqing, Sichuan, Yunnan, Jilin, Heilongjiang, Tibet, Xinjiang		Imports ▪ USD 1.52trn Annual Transactional Turn Over

Figure 2: Trade covered by phase 2 of the Pilot Scheme

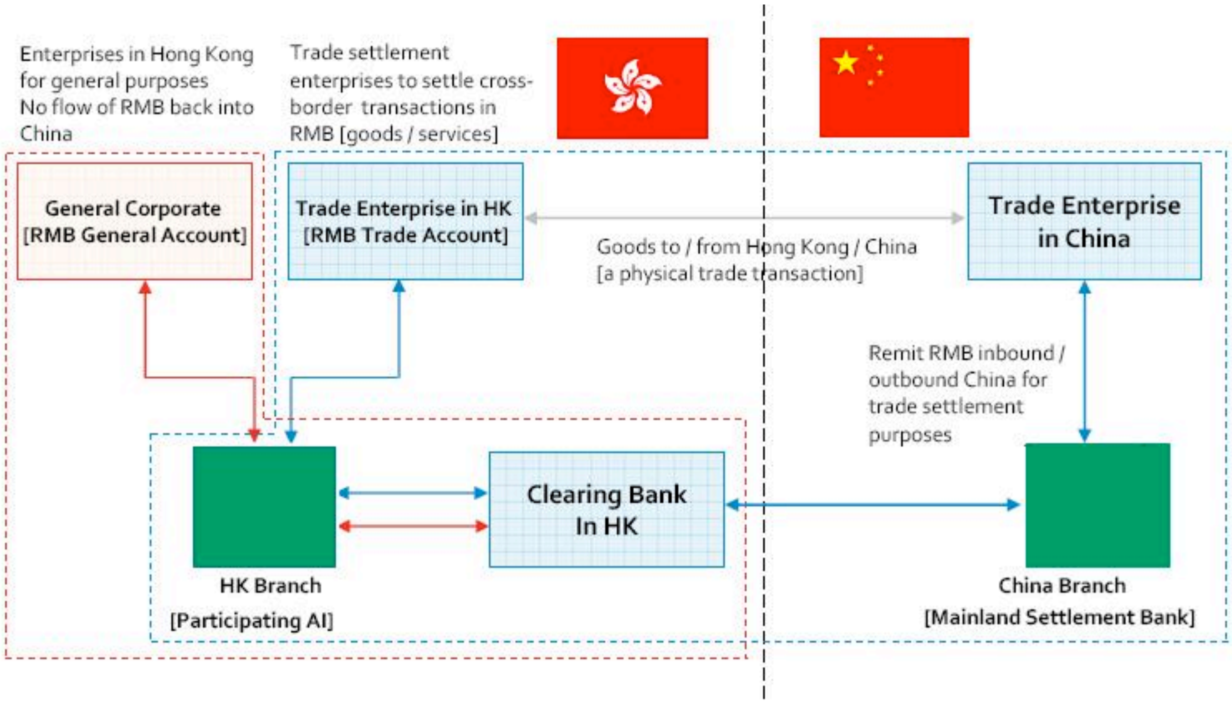
Exports covered relative to total Chinese Exports | Imports covered relative to total Chinese Exports



Source: National Bureau of Statistics of China

The process of this settlement necessitates a fairly complex financial settlement architecture which has been established between Hong Kong and the PBoC and which is centred around a trading settlement backbone that expands to giving access to a range of financial services offered primarily by the settlement banks in Hong Kong but more generally all institutions established in the pilot zone. Indeed, in August 2010, HKMA issued a circular allowing all authorised institutions to take part in the interbank bond market in RMB through a settlement agent and after approval by the PBoC.

Figure 3: Pilot Scheme settlement diagram



Source: HKMA, PBoC, BNP Paribas

Banks in the selected areas outside the Chinese mainland participating in the Pilot Scheme (non-mainland participating banks) can provide RMB services to enterprises that choose to settle trade transactions in RMB with the mainland designated enterprises[6]. Such services include:

- **Deposit-taking:** Enterprises in areas covered by the Pilot can open RMB deposit accounts with non-mainland participating banks. Such deposit accounts are primarily for handling RMB receipts and payments related to the settlement of trade transactions with the mainland designated enterprises. The deposits can then be used for investing in RMB securities.
- **Currency exchange**: FX services can provided although the exchange for RMB is limited to the amount of actual trade transaction.
- **Remittance:** Two-way remittances can be conducted between the enterprises outside the mainland and designated mainland enterprises for genuine trade transactions.
- **Trade finance:** RMB trade finance can be provided for trade transactions with the mainland designated enterprises. Such trade finance is limited to the amount of a corresponding trade transaction, and should be paid to the mainland designated enterprise directly.

Hong Kong banks started in 2004 to offer basic RMB banking services such as deposit taking, remittance and foreign exchange. The scope of the RMB in Hong Kong has been expanded twice in 2005 and in 2007 through relaxation of national regulation by HKMA but the

[6] The list of designated enterprises is updated regularly by Chinese authorities.
http://www.pbc.gov.cn/publish/huobizhengceersi/3131/2010/20100915162829888267153/2010091516282988 8267153_.html

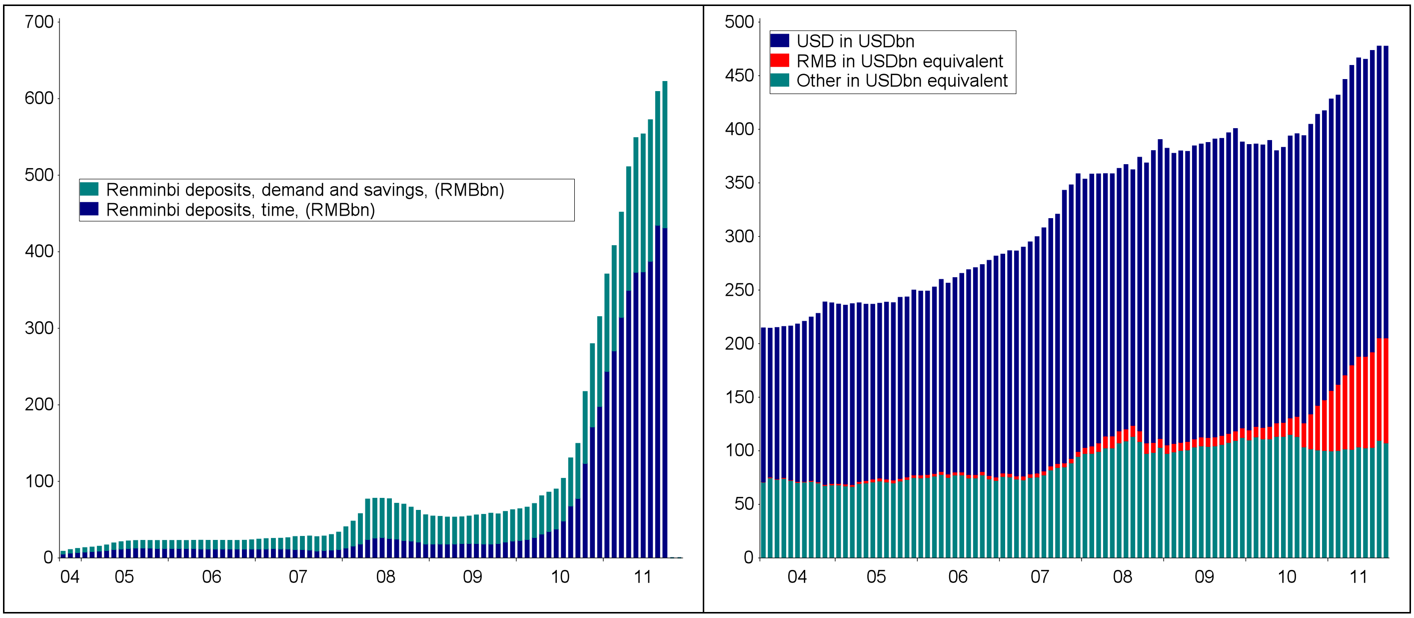
introduction of the pilot scheme gave a new breadth to the RMB-denominated financial activity in Hong Kong.

But beyond the transactions undertaken strictly under the pilot scheme, RMB holdings outside of China are growing fast because there are no more restrictions forcing them to be remitted or exchanged back into another currency. As a result, the natural growth of RMB deposits will be at minimum equal to the trade surplus of the participating regions with the rest of the world. In addition, importers seem to be very active users of the settlement scheme and are rightly positioned to raise trade finance in RMB offshore and to take advantage of the lower interest rates offshore due to excess deposits and a dearth of RMB offshore securities.

In 2010, ASEAN countries were running a trade surplus of some USD 16.1 billion with the mainland. This means that if just half of the exporting firms in the pilot region used the possibility to settle in RMB, it would give rise to about USD 7.7 billion of deposits each year accumulated in ASEAN countries, and by analogy about USD 87 billion in the rest of the world. This would create a large natural deposit base and subsequent demand for RMB assets. Note that these estimates are quite conservative because it is very possible that agents decide to keep more of their net trade with China in RMB, which is what we have observed so far. Also, if we judge by the pace at which the pilot has been expanded from five cities to 20 regions and from ASEAN to the rest of the world, we could expect the scheme to be further broadened relatively soon.

In addition, reports by investment banks[7] suggest that part of the deposit growth was driven by opportunities to generate risk-free income through arbitrage given Chinese imports from affiliate companies that can take advantage of a low offshore rate versus a high onshore RMB deposit rate. This also explains the rapid rise in deposits outside of the mainland if mainland importers are bigger users of the scheme than exporters despite the net trade surplus of China.

Figure 4: Foreign exchange and RMB deposits in Hong Kong



[7] Becky Liu, RMB Offshore Bonds: Credit market in infancy and risks not well understood, HSBC Fixed Income Research, June 2011

Source: Hong Kong Monetary Authority and Author's calculation

RMB deposits in Hong Kong have effectively quadrupled since the inception of the pilot scheme. Deposits in ASEAN countries must also have started to grow rapidly although not all ASEAN central banks provide this data. RMB deposits in Hong Kong now represent about 20 percent of foreign currency deposits in the banking system and what is striking is that the substitution in private deposits is happening against the USD while holdings of other foreign currencies is roughly stable.

But for the offshore market to work effectively and to convince the authority that it doesn't create a threat to the monetary equilibrium; there needs to be a balance between the RMB that leaves China or that is created outside of China and that on the onshore market, which is the one that monetary authorities physically control locally. In August 2010, the PBoC allowed central banks and RMB clearing banks in Hong Kong and Macau, as well as international banks participating in the cross border trade pilot, to access the interbank onshore market. But they still need approval from the PBoC and can only invest within a certain quota limit that tends to be relatively small. Yet this constitutes an essential feature to allow a degree of controlled circulation between offshore and onshore markets. The RMB offshore (also know as CNH market) is now effectively a deliverable, convertible currency, and financial products denominated in CNH are relatively freely accessible to a range of international investors. This is an important landmark in the internationalisation process of the RMB. The co-existence of the CNH (offshore) and CNY (onshore) market allows Chinese authorities to control the communication valve between the two markets and to control their domestic financial system while effectively establishing a currency that is accessible internationally.

ii. Bilateral trade settlement agreements

During 2009, almost each Chinese state visit to a large emerging economy was marked by a bilateral trade agreement that included the development of bilateral settlement in national currencies. Such pledges were taken first in Brazil in May 2009. This call was echoed in a number other countries, most recently in Turkey in December 2010, which also pledged to increase bilateral trade with China and settle in local currency.

Conversations followed on the sideline of the Bank of International Settlement meetings, between the Governor of the Central Bank of Brazil and the PBoC, who confirmed that they were launching practical studies on the feasibility of such settlement agreements. But so far, nothing concrete has emerged from those discussions and this proposal has remained largely a political posture actively used in discussions about the reform of the international monetary system but of limited practical impact. In particular, a number of BRIC summits continued to advocate for "*local currency trade settlement arrangement between our countries*" [8] but limited actions to that effect have been taken.

iii. Chinese trade promotion institutions

[8] http://www.fmprc.gov.cn/eng/wjdt/2649/t688366.htm

Beyond, agreements for trade settlements which necessitate thinking about the financial architecture and the appropriate controls underpinning those exchanges, Chinese institutions involved in the promotion of trade have always indirectly promoted the RMB if not as a settling currency, at least as a reference currency. The Chinese Ex-Im Bank (the largest such institution in the world, about 25 percent bigger than the US Ex-Im Bank in terms of assets) denominates all of its loans in RMB. The Chinese Development Bank, which has an essentially domestic mandate (asset size is more than USD 300 billion) but which has some role in international investments, also plays a role in the international stature of the RMB. In particular, those institutions not only help to denominate China's International Assets in RMB (loans of these institutions are always in RMB), they are also large suppliers of RMB assets through their borrowing programme recently available to international investors through the offshore market.

All in all, the combination of pilot scheme and the verbal commitments taken vis-à-vis other emerging countries suggests an activist policy of internationalisation of the RMB through international trade, which is still in its infancy. This shouldn't be underestimated given that the scope for expansion is quite large and will probably only be stopped by shortages of RMB assets once the international demand for those rises, commensurate with the increasing holdings of RMB offshore as can be seen in Hong Kong. This will then raise the question of the financial account restrictions (see section III).

In the meantime, the breadth and scope of the development of trade finance related to this trade settlement initiative could be an essential contributor to the rise of the RMB on the international scene. Although, the literature on currency internationalisation often fails to give justice to the central role of international trade to set an internationalisation process in motion, it has proven an essential pillar of currency internationalisation. As Flandreau and Eichengreen (2009), or Eichengreen (2011), have showed, the rise of the dollar after 1914 was intimately linked to its assent as a trading currency through the rise of *trade acceptances*, the then-standard form of trade finance. The war ravaging continental Europe also played its part from 1914 to 1918, in shifting the centre of world finance from London to New York, but effectively it is by taking over trade finance that the US established the dollar as a world currency which displaced sterling in little more than a decade. One should therefore not underestimate the importance of recent Chinese initiative. In addition, these could be substantially broadened if the current difficulties affecting banks in advanced economies were to challenge their dominance on international trade finance, thereby opening up an avenue for China to establish its banks and its currency in this business segment.

2. Growing international assets in RMB

The RMB's international advance will undoubtedly raise the question of its use in financial markets. Indeed, as we have showed above, the appetite for keeping RMB holdings in time deposits (see Figure , chart 1) grows as fast as the offshore deposit themselves suggesting a clear need for the RMB to be used as a store of value. The natural demand for RMB assets already outpaces the supply in those assets despite recent efforts to accelerate the rise of Hong Kong as a key issuer of offshore RMB assets.

i. Securities issuance in Hong Kong

Since 2007, mainland financial institutions, after obtaining relevant approval from the authorities, can issue RMB bonds in Hong Kong. In late 2009, sovereign bonds issued by the Ministry of Finance were sold for the first time outside of Mainland China helping to establish a proper benchmark interest rate curve. This helped to provide the foundation for the creation of a more liquid market. The scope of authorised issuers was extended in 2010 to the mainland subsidiaries of Hong Kong banks and was subsequently more broadly opened to international companies in the later part of 2010 with the establishment of the offshore market.

This attracted an encouraging response with a large number of issues in a short period, and was met by a strong investor demand for RMB bonds offshore. Yet, net issuance lags far behind the net increase in RMB deposits, which contributes to a fundamental imbalance in the offshore market that depresses RMB offshore interest rates.

a) Scope

Table 2 : Onshore / Offshore RMB securities market

	Offshore	Onshore
Size (RMB)	>200bn	>18,000bn
Issuers	Supranational (ADB, World Bank) Chinese Quasi-Sovereigns (China Development Bank) Mainland Chinese Banks International Corporates	All onshore entities
Investors	All Foreign Investors	Central Banks and RMB offshore settling and clearing banks
Liquidity	Poor	Good
Instruments	Treasury Notes Financial Bonds International Corporate Bonds Supranational Bonds Corporate Bonds Certificate of Deposit	Treasury Notes PBoC liquidity bills Financial Mainland Corporate MTNs Commercial Paper
Clearing	CMU/Euroclear/Clearstream	China Govt Depository, Trust and Clearing
Tax	Tax free except income tax of 16.5% on corporate bond	5% tax on capital gains on Govt Bonds if sold before maturity 25% on income tax and capital gains subject to 30% tax (25% income + 5% business tax)
Law	Hong Kong Law	PRC Law

Source: HKMA, PBoC, Bloomberg

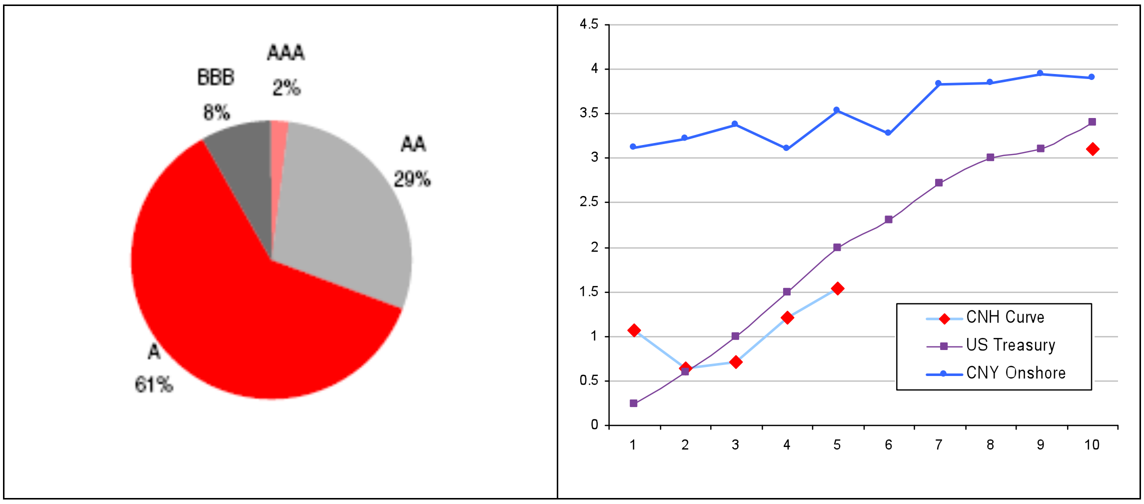
There are not yet any regulations regarding CNH bond issuance by mainland corporations but this is unsurprising considering this would contribute to leakage between the onshore and offshore markets and would make controls more difficult. Hence we could expect authorities to wait before allowing this and to limit this to state-owned enterprises, over which effective control is strong.

b) Outlook

Although the offshore RMB market has made considerable progress in a very short period of time, there is scope for improvement on a number of fronts to help it grow and deepen in order to provide a significant supply of high quality and liquid RMB assets, which is necessary for the RMB to gain credibility not only as means of exchange but also as a store of value and unit of account.

As it stands, the ratings of the RMB offshore securities are such that the offshore market does not offer enough AAA securities. This could be easily achieved once foreign sovereign issuers decide to issue in RMB, possibly swapping the proceeds in another currency. Note that the rise of '*Samurai bonds*' in the early 1990s contributed to a large degree to deepen and broaden the asset base in yen. This is a path that could easily be followed by issuers seeking advantageous rate and demand for their bonds. Along those lines, the first supranational issue by the World Bank was a good step in this direction and a sovereign issuer of a developed country could be an important source of credibility and depth to this market.

Figure 1: Rating Breakdown and Interest Rate Curve of the Offshore RMB Market



Source: HSBC, Bloomberg, as at March 2011

However this very question of the asset quality is not easy and could well be challenged by the leading Chinese rating agency, Dagong, which seems to be taking a relatively stringent view on sovereign ratings, in particular.

There are other key changes that could help to broaden the RMB offshore market. In particular:

- First, the RMB market is for now mostly designed to cater to fixed-income investors while one could envision a scheme allowing the RMB market to serve also as an equity market platform or as an avenue to control the access of international investors to the onshore equity market in replacement or in conjunction with the existing Qualified Foreign Institutional Investor framework (see section **Error! Reference source not found.**).
- The Hong Kong Stock exchange could open a dual listing or different stock exchange with stock listed in RMB as well as in HKD, or a more simple move of the entire HKD listing towards RMB which has been discussed in some Chinese policy circles.

- The other essential hurdle in the way of an expansion of the offshore RMB is the current incapacity of onshore non-financial corporates to issue offshore. They represent a large majority of the current onshore market and could alone be the single largest source of growth of this market, although they would not help to improve the overall rating quality of the asset base.
- Last, nothing sets Hong Kong as the only centre of RMB offshore. It has become the *de facto* centre but is not *de jure* the only one. One could envisage that an international financial centre such as London or New York could start to issue and trade offshore RMB securities. Regionally, Singapore sees the challenge coming from Hong Kong and is starting to market itself as a potential RMB offshore centre and Commercial banks in Taiwan are contemplating issuing such securities.

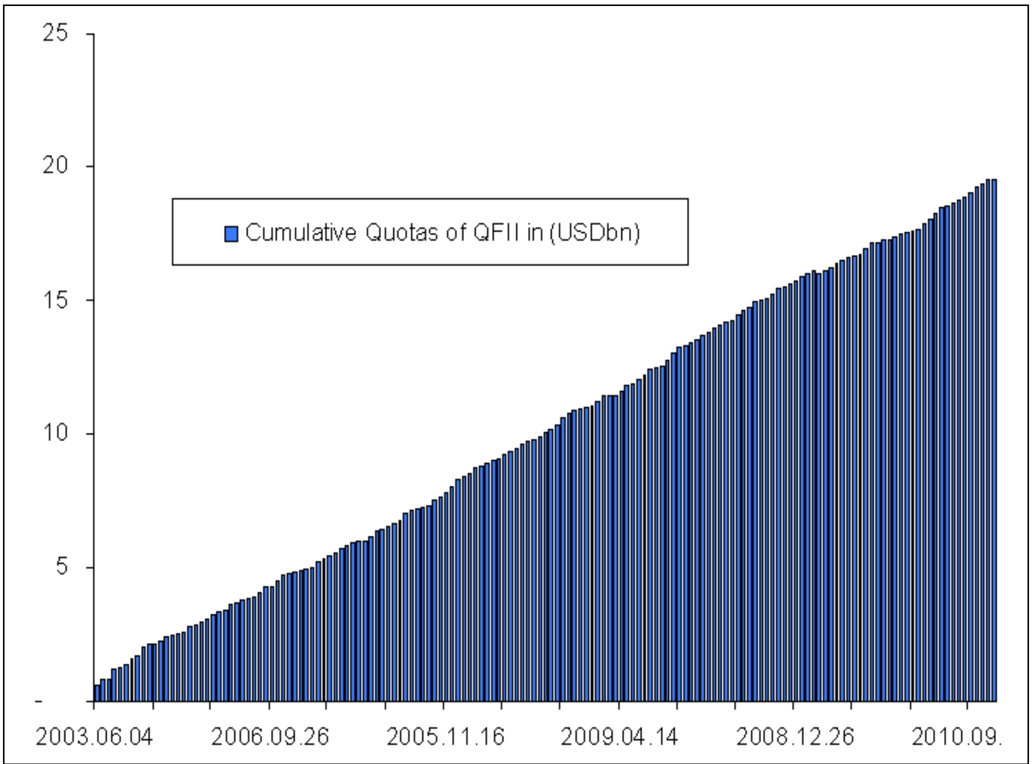
All and all, and despite these challenges, most analysts[9] expect RMB offshore issuance to continue to grow rapidly and to nearly double in 2012 to reach 400 to 450bn RMB.

ii. Expansion of the Qualified Foreign Institutional Investor Scheme

The qualified foreign institutional investor (GFII) scheme was created in 2002 and was one of the first few signs of increased financial account openness following China's entry into the WTO in 2001. Effectively, it allows a select group of international investors accessing the Chinese stock exchange denominated in RMB. Each investor is given a fixed non-transferable quota. Chinese authorities therefore control the number of participants, their maximum individual exposures and the aggregated foreign exposure. The approval process is long and cumbersome and managed largely by the China Securities Regulatory Commission. The selection criteria are not only based on the quality of the institution but also on the regulatory framework of the home country, provided the country in question has also signed a specific Memorandum of Understanding with China.

Figure 2: Qualified Foreign Institutional Investors Scheme

[9] Becky Liu, RMB Offshore bonds: Moving towards a buyers' market, HSBC Fixed Income Research, November 2011



Source: SAFE, Author's calculations

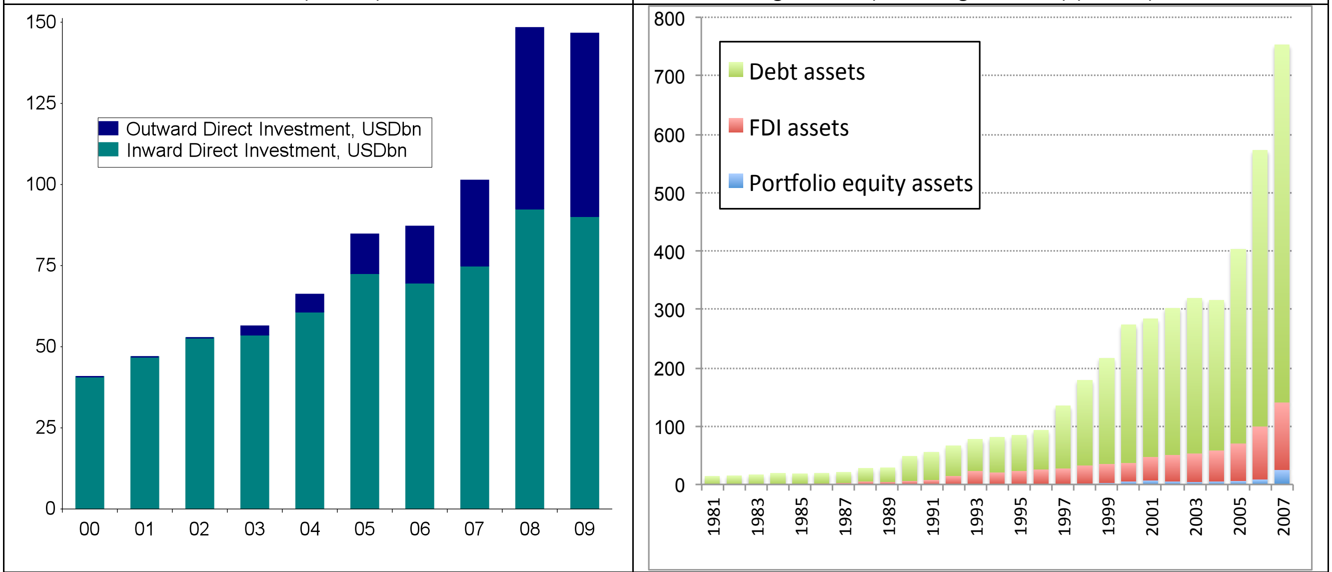
There are hopes (and pressure on China) that this framework would be broadened to a wider range of participants and expanded, but Chinese authorities continue to cap the programme at USD 20 billion. This has been discussed by the US Treasury and was a pressing demand of Treasury Secretary Paulson under the US-China Dialogue initiated under his time in office, to no avail. This signals a willingness to keep the doors to the domestic market largely shut but may not necessarily be an unsurpassable obstacle to RMB internationalisation, especially if other routes to loosen financial account restrictions are undertaken.

iii. Settlement of overseas direct investments in RMB

Although maybe less significant in size, a new initiative was introduced by the PBoC on 13 January 2010, which could be a first very relevant step paving the way for some form of financial account liberalisation. The PBoC's initiative allows all firms and countries eligible under the Trade Settlement Pilot Scheme to settle their overseas direct investments in RMB. Although the amounts are likely to be only a fraction of what the trade settlement is, this is a clear step in the direction of opening the financial account under the auspices and controlling framework of a pilot scheme. Under this Pilot Scheme, mainland enterprises, following approval by the relevant mainland authorities, can settle direct investments overseas using RMB. Moreover, foreign branches and correspondent banks of mainland banks can obtain RMB funds from the mainland and extend RMB lending to the companies conducting the investments. In 2009, direct investments in and out of China represented some USD 150 billion (see Figure 3). If this was accompanied by an ambitious drive for Chinese firms to invest overseas, it could not only help to spread the RMB but would also allow mitigation of some of the natural constraints for the internationalisation that are associated with the fact that China is a net creditor to the rest of the world. There are reasons to believe that, barring regulatory and protectionist hurdles; there will be a growing appetite for Chinese firms to deploy their capital abroad (see Deng, Hafsi, and Tian, 2007). In fact, Rosen and Hanemann (2009) argue that China's overseas foreign direct investment will necessarily grow rapidly as China continues to rebalance its economy and deploy more private capital overseas.

Figure 3: Chinese Overseas Investment

Overseas Direct Investments (USDbn)	China's Foreign Assets (excluding Reserves) (USDbn)



Source: National Bureau of Statistics, China	Source: Lane and Milesi-Ferretti (2009)

Although the scheme remains fairly constraining, effective convertibility has gone beyond simple current account transactions. This is a small step in nominal terms but symbolically a very meaningful one regarding potential future openness of the financial account. The fact that it happens so early in the life of the internationalisation process continues to suggest that the internationalisation of the RMB is following a rapid course, although important obstacles remain. We discuss this in more detail in Section III.

3. A Potential Official Reserve Asset

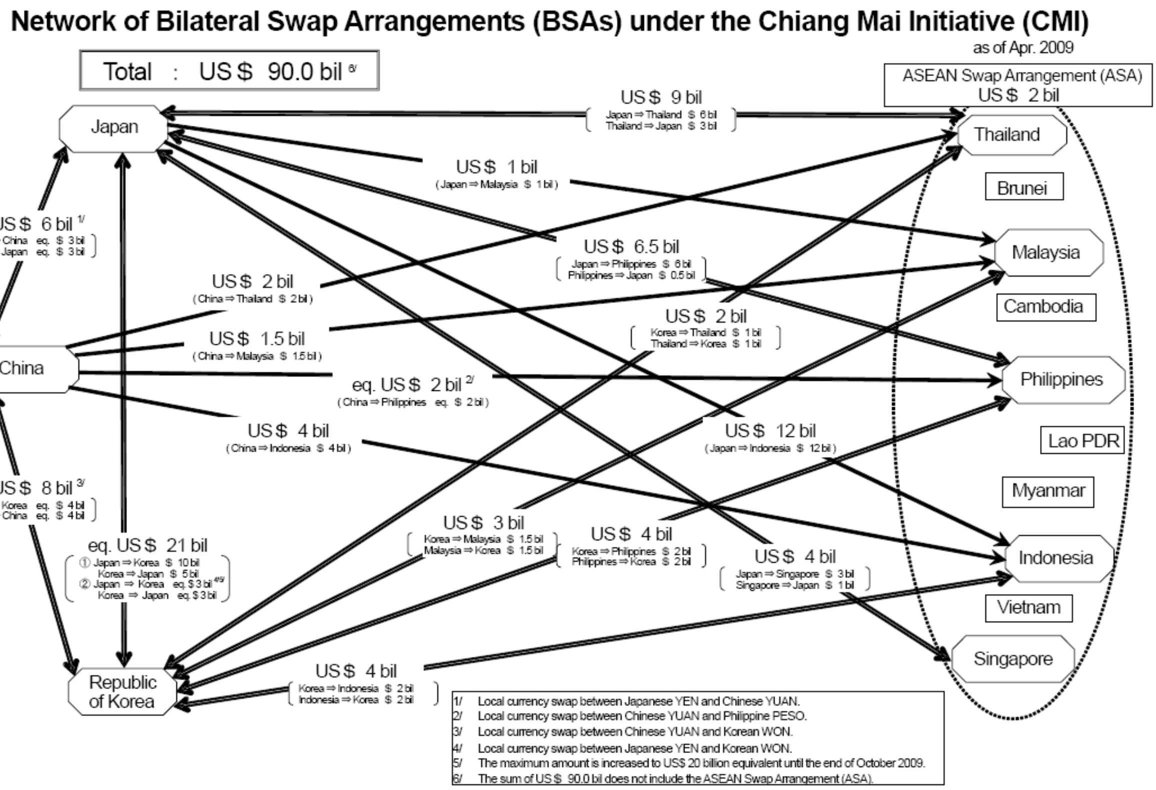
Establishing a currency internationally is one thing. Establishing it as a currency reserve is generally more challenging and is seen as the culminating point of the internationalisation process. Creating such conditions of credibility and ubiquity that make the holding of one's currency by central banks desirable and necessary is ultimate litmus test. So far, the RMB hasn't succeeded but there are important developments suggesting this could happen more rapidly. But China's stature in the monetary system and therefore in world reserves is going to be directly linked to its ability and willingness to act or be perceived as a credible lender of last resort.

i. Chiang Mai Initiative and multi-lateralisation

The Asian crisis of 1997 was such a traumatic event that it led Asian countries to try and shield themselves against the vagaries of capital flows and harsh adjustment programs designed by the IMF. This initiated the idea of a regional IMF-like institution. It turned out to be relatively complicated to set up and Asian economies instead started by establishing a complex web of financial safety nets relying on currency swap arrangements between

Central Banks. It was the first time that Asian countries agreed in principle to exchange their hard currency reverses in case of hardship but also the first time they established avenues to exchange their own currencies amongst themselves effectively creating the basis of a diversification into Asian currencies of their assets and raising the question of currency convertibility.

Figure 4: Chiang Mai Initiative



Source: Ministry of Finance, Japan

The Chiang Mai Initiative was never drawn upon and evolved progressively from a complex web of bilateral arrangements to a more institutionalised multilateral regional arrangement. This last stage known as the multi-lateralisation (as opposed to its original bilateral nature) is fairly recent and was accelerated and concluded as a result of the 2008 financial crisis.

Table 3: Chiang Mai Initiative Multilateralisation

	Financial contribution		Purchasing Multiple	Voting Weight
	USD (billion)	(%)		
China	38.4	32.00	3	28.3
Japan	38.4	32	0.5	28.4
Korea	19.2	16	1	14.77
Plus 3	**96**	**80**	-	**74.47**
Indonesia	4.77	3.97	2.5	4.36
Thailand	4.77	3.97	2.5	4.36
Malaysia	4.77	3.97	2.5	4.36

Singapore	4.77	3.97	2.5	4.36
Philippines	3.68	3.07	2.5	4.36
Vietnam	1.00	0.83	5	1.84
Cambodia	0.12	0.1	5	1.22
Myanmar	0.06	0.05	5	1.17
Brunei	0.03	0.02	5	1.15
Lao PDR	0.03	0.02	5	1.15
ASEAN	**24**	**20**	-	**28.33**
Total	**120.00**	**100.00**	-	

Source: ADBI Institute

The Chiang Mai Initiative in its current incarnation, which some argue is not its final one (Kawai, 2010), allows participating countries to draw upon an agreed upon line for very short period of time (90 days renewable a maximum of 7 times). Beyond this point, the country needs to make a formal IMF program request which typically would come with far more conditionality than the gentle one offered under the CMIM. What is interesting is that China, as the largest creditor economy of the participating countries would play an important financing role in the initiative akin to that of a regional lender of last resort.

ii. Bilateral Swap Arrangement

Most Asian Central Banks came into the crisis with very large amounts of precautionary reserves, which helped them withstand the financial blow although the violence of the shock was such that it showed the degree to which financial safety nets could indeed prove useful and how much they needed to be strengthened. The progress of the Chiang Mai multi-lateralisation had somewhat stalled in recent years, as memories of the 1997 Asian crisis faded. But beyond Chiang Mai, the crisis also pushed most countries to take emergency measures to ensure that their stock of reserves and liquidity would shelter them from the worse consequences of the crisis.

The PBoC in particular, with its large stock of reserves played an important role in this respect and very quickly offered Currency Swap arrangements to a number of emerging economies in Asia and across the world. This had a significant confidence boosting effect as it showed that the largest holder of FX reserves in the world was ready to play the role of an ultimate liquidity backstop for those central banks. Although in fact, the terms of the exchange were not to swap hard currency held at the PBoC against local currencies of those countries.

Although no firm data is released on the matter by the beneficiary Central Banks or the PBoC it seems that they were not used (apart from HKMA[10]) and therefore remained largely symbolic.

Table 4: Bilateral FX Swap Lines of the PBoC

Counterparty	Date	Size (RMBbn)
Bank of Korea*	12-Dec-08	180
Hong Kong Monetary Authority	20-Jan-09	200
Bank Negara Malaysia	08-Feb-09	80
National Bank of the Republic of Belarus	11-Mar-09	20

[10] This line was not drawn by the Hong Kong Monetary Authority in response to the crisis but rather in the context of the trade finance pilot scheme described above

Bank Indonesia	23-Mar-09	100
Central Bank of Argentina*	02-Apr-09	70
Central Bank of Iceland	09-Jun-10	3.5
Monetary Authority of Singapore	23-Jul-10	150
Reserve Bank of New Zealand	18-Apr-11	25
Central Bank of Uzbekistan	22-Apr-11	0.7

Source: PBoC

Note: all swaps have a three-year maturity and are extendable upon agreement by both parties.
* indicates that the swap agreements with Bank of Korea and the Central Bank of Argentina are still framework agreements and are therefore not immediately effective.

But more than dealing with the immediacy of the crisis, and beyond the confidence effects, one should also look at these swaps as a way to open the door to the dissemination of RMB across the world as and when needed. Indeed, the pilot program discussed above will necessitate that the China's trading partners access RMB liquidity for settlement purposes, they can do this through the interbank market but banks could also use their domestic central banks to obtain RMB liquidity if these were duly supplied by the PBoC through the currency swap lines from instance. Those swap lines should therefore be seen as facilities both to disseminate RMB liquidity in fair weather and to provide a large liquidity backstop in stormy weather. They respond to two crucial features of an international currency: the acceptance to play the role of lender of last resort in situation of crisis and the willingness to facilitate trade invoicing and international transactions.
This nonetheless leaves the question of whether the RMB could become an intervention currency the way the yen has for instance. This is highly dependent on the flexibility of the RMB but also on the role that China will want to play on the monetary scene. For the RMB to become an intervention, China will need to be far more engaged (and also far more welcomed in international monetary policy forums). Global FX interventions remain so far largely a G10 prerogative, in fact rather a G3 (Federal Reserve, Bank of Japan and European Central Bank). In addition, FX intervention would certainly necessitate a greater degree of convertibility. At the moment, the PBoC, could only intervene using its own currency in the Non Deliverable Forward market. However, the FX swap lines embedded in Chiang Mai or the bilateral ones signed since 2009 do envisage delivery of RMB and they could be seen as the embryonic form of a currency convertibility between a selected number of Central Banks.

iii. Tripartite Asset Exchanges (Korea-Japan-China)

China has been a heavy buyer of international securities but it has made distinct diversification efforts as of late buying substantial amounts of Korean or Japanese bonds and trying to reduce its relative holding of dollar assets. It is unclear whether the rationale is purely one of diversification or whether there are also mercantilist attempts to push the exchange rate of China's direct competitors higher. But regardless of the exact motives, these purchases have raised a lot of questions. This buying hasn't been met yet with reciprocal purchases although a number of Asian central banks have expressed interest in diversifying some of their assets in RMB. The Bank Negara Malaysia actually claims that it is purchasing Chinese government bonds (size is not disclosed) but it is not immediately clear how they could effectively do that directly given they have no formal access to the RMB onshore market. They could probably do so through an onshore-authorised custodian. Since August 2010, international Central Banks are allowed in theory to enter the domestic onshore markets but none have been granted the authorisation by the PBoC as of yet which constrains substantially the ability of any central bank to accumulate domestic onshore securities.

The Korean government has, under the initiative of its Deputy Minister of Finance, tried to address this unbalanced relationship by offering China and Japan (and possibly more countries in the future) to exchange securities of their own countries. They believe this would allow diversifying their reserves simultaneously and reciprocally and thereby avoid distortions of doing those purchases in the open market. It is unclear whether this exchange proposal will actually be implemented or whether it will lead China to accelerate the opening of its own securities market and/or financial account to foreign central banks but the growing conflicts of a rapidly internationalising currency and closed financial account are becoming more visible and will certainly gradually open cracks in the financial account. Indeed, asset scarcity and the difficulty to access high rated securities seem to impede the spread of the RMB in international reserves while demand is clearly growing.

III. The Roadmap towards Internationalisation

1. Financial Account Openness[11]

The literature on capital controls and financial liberalisation is particularly prolific but is also remarkably politicised. Indeed, the struggle for financial openness and financial liberalisation raged in the 1990s and framed a large part of the academic debate about the relevance and effectiveness of capital controls. Through the 1990s, the international financial community and in particular the IMF forged a consensus on the merits of financial globalisation. Yet outside of academic circles, the reality is that a large part of the world embraced this idea while another part of the world built another paradigm revolving around limited capital flows combined with fixed or managed exchange rate.

i. Measuring Financial Openness

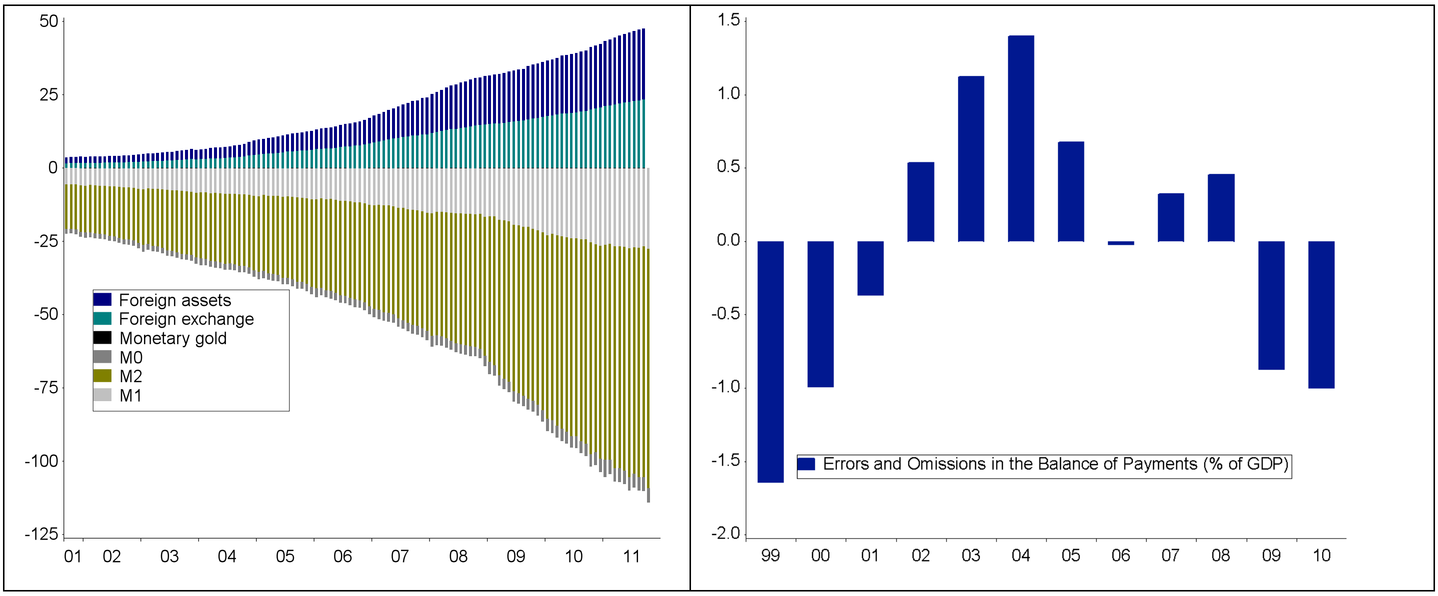
The question of China's financial account openness has been an important one for decades. It was an essential demand made during the WTO accession negotiations and continues to remain one of acute policy and academic debates.

In the Chinese perspective, risks to financial account openness are fairly symmetric. Financial inflows, if uncontrolled can destabilise domestic monetary policy and risk creating bubbles and misallocations of capital. They are also ultimately subject to extremely destabilising sudden stops, which have important effects on output and financial stability. But this is not the only source of concern. Indeed, as Alan Greenspan noted in 2003, "*many in China fear that the removal of capital controls (…) could cause an outflow of deposits destabilising the entire financial system*". This is indeed a recurrent concern for Chinese policymakers rooted in a strong preference for political stability which Chinese authorities see as inextricably linked to financial stability. The very high stock of fiduciary money relative to GDP or relative to foreign assets (see Figure 5, chart 1) is an important risk factor to consider. Indeed, if Chinese households and corporates decided to change their RMB into hard currency, say on the back of an acute political or economic crisis, they could easily wipe out most, if not all, of China's FX reserve. This is certainly a tail risk but clearly one that the Chinese leadership has very much in mind and which at least partially explains a relative reluctance to openness.

On the other hand, financial inflows controls exist but have not prevented substantial foreign financing. Chinese authorities have tried to orient these flows rather than block them altogether and they have in fact succeeded in reducing the share of portfolio flows in financial inflows to the benefit of direct investments.

Figure 5: Money Stock and Foreign Assets and Leakage from unrecorded transactions

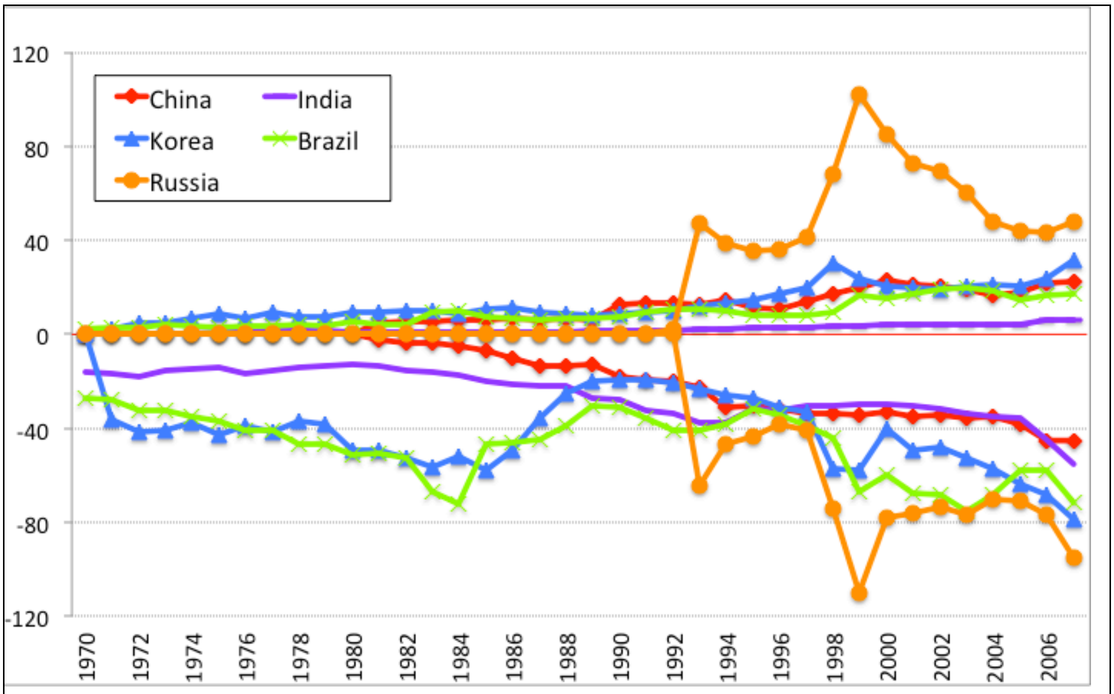
[11] We use here the new nomenclature of the IMF and refer to *Financial Account* for all financial transactions in the balance of payments including FDI, portfolio flows and other investments. Most of the literature continues to use the word *Capital Account* to refer to the same components in the balance of payments. We keep this reference to *capital account* when referring to authors that have used this terminology but prefer to use financial account wherever possible.



Source: Reuters

The bottom line is that despite all the characteristics of closed financial account, China's investment position suggests a slow but remarkable growth in foreign inflows. In addition, there are reasons to believe that current account transactions allow dissimulating important inflows and the relatively large errors and omissions balance (sometimes as much as 1% of GDP annually) is certainly a sign of hidden or unrecorded financial inflows.

Figure 6: Comparative and Aggregated view on China's Openness. Cumulative Assets (minus reserves) and liabilities as a percentage of GDP



Source: Lane and Milesi-Ferretti (2009) and author's calculations

As illustrated in Figure 6, China is therefore far from being completely financially closed. However, China clearly lags behind its peers in financial openness if we exclude its large official reserves. Hence, if China is more open than its regulations suggest, it is still on the whole far more closed than its emerging markets peers. Its closest equivalent is India although recent data from Lane and Milesi-Ferreti (2009) suggest that China could be even more financially closed than India. The breakdown shows that the asset size is far more open but one could just see this as the flipside of China's substantial creditor position which forces it to build a large positive Net International Investment Position.

ii. Path Towards Increased Financial Account Openness

This relative closeness is generally seen as an essential challenge for the establishment of the RMB as a leading international currency. But this conclusion needs to be nuanced. The process would certainly be easier and more rapid with a fully open financial account but this does not mean that a relatively closed financial account forbids completely all internationalisation prospects.

China has observed a very conservative path towards financial account openness. An approach also followed by India, which engaged in a process of gradual but very slow openness. China has never really disclosed its intentions while India's policy discussions on the matter have been made public in particular in the form of the Tarapore Committee set up by the Reserve Bank of India back in the late 1990s.

The analysis of the Tarapore committee (1997) highlighted two sets of imperative preconditions necessary to launch the opening of the financial account for India but more generally for all emerging economies engaged in a process of liberalisation. First, they highlighted the fact that cases where capital account liberalisation preceded banking sector reform appeared to have precipitated financial crises or at least created acute risks of such. Mexico, Indonesia, Thailand and the Philippines stood out as cases in point.

The second Tarapore Committee Report (2007) worked more specifically on the sequencing of openness in more details and considered that "*the preferred approach across countries has been to relax restrictions on inflows by non-residents and related outflows before removing restrictions on capital outflows by residents".* This approach is reasonable in the context of most emerging economies but might actually not be as relevant for China.

Indeed, for a large current account surplus country and a net creditor, what appears more urgent is to allow more financial outflows. This could compel Chinese authorities to sequence the liberalisation of the financial account differently than most emerging economies. Indeed, as Rodrik and Subramaniam (2008) reminded us insightfully, a large number of emerging countries are not credit constrained. In this context, one could reasonably argue that the most logical path of financial account openness for China, should it be pursued, would actually consist in gradually relaxing constraints on outflows rather than inflows. This would allow Chinese firms and individuals to invest overseas more freely and could contribute to a rebalancing that would enhance capital allocation both domestically and internationally as China's net foreign investment position would gradually move from being invested in low yielding advanced economies government securities to higher return international investments. In addition, such a sequence of liberalisation would bring about macroeconomic benefits such as rebalancing by reducing China's need for foreign exchange intervention and would also certainly present a number of benefits for financial stability (see following section). Hence, it is not so much China's full financial openness that is really necessary for the advancement of the RMB as a an international currency but rather the more limited and specific restrictions on financial outflows which are in fact already being slowly relaxed in particular for direct investments (See Rosen and Hanemann (2009)). In the meantime, even if the relaxation of the restrictions on the financial account are slow, the existence of the offshore market can play an important transitory role by allowing firms to issue securities in RMB and thereby boost the asset base available in RMB. The growth in assets in RMB in the last two years with limited capital account openness suggests that organic growth in the issuance of assets in RMB and limited financial account are compatible.

In this respect, the Japanese experience of internationalisation in the early 1990s is particularly interesting. The growth in the euro-yen and the Samurai bond market greatly helped to boost the use of the yen in international financial markets. Financial deregulation and the reduction in financial account restrictions allowed Japanese savings to be mobilised internationally through the issuance by international sovereigns and corporates of debt securities in yen, in the euro-yen market (yen denominated securities issued in international jurisdictions and then Samurai bonds (yen denominated bonds issued by non-Japanese entities in Japan under Japanese Law).

Figure 7: Rise and Fall of Issuance of Debt Securities in Yen (bonds and Notes)

	Overall	US issuers	European issuers	Japanese issuers
		1993 Q3 - 1998 Q4		
Dollar	44.3%	77.2%	25.6%	29.9%
Yen	14.0%	4.6%	11.1%	52.6%
Deutsche Mark	9.9%	4.1%	18.3%	3.5%
British Pound	7.3%	4.3%	3.8%	2.3%
Swiss Franc	3.6%	2.1%	4.6%	8.1%
Canadian Dollar	1.1%	0.6%	1.0%	0.4%
Australian Dollar	1.3%	0.6%	0.6%	0.5%
		1999 Q1- 2004 Q4		
Dollar	42.8%	82.2%	14.7%	25.3%
Yen	4.6%	2.5%	3.3%	60.5%
Euro	41.0%	10.6%	73.7%	9.6%
British Pound	6.7%	3.0%	3.9%	1.2%
Swiss Franc	1.4%	0.7%	1.9%	1.1%
Canadian Dollar	0.7%	0.1%	0.2%	0.4%
Australian Dollar	0.8%	0.4%	0.6%	0.3%

Sources: Cohen (2005), Dealogic; Euroclear; ISMA; Thomson Financial Securities Data; BIS calculations.

But this moment of rapid yen internationalisation wasn't long lasting and despite those many efforts and a clear momentum, the yen rapidly lost its traction. It is difficult to pin down exactly what led to this fairly abrupt change of course but it is clear that the darkening economic prospects of Japan following the implosion of the bubble in the early 1990s reduced the appetite for the yen internationally. In addition and maybe more importantly, the collapse of the Japanese banking system prevented Japan from playing the role of "banker of the world" which is precisely the defining feature of the issuer of a global currency according to Kindleberger (1965). Indeed, Japanese banks had risen to regional prominence and had started to establish a global outreach in the 1980s. This was abruptly ended by the Japanese crisis, which sapped the foundation of the Japanese financial sector and eventually that of the yen as a leading reserve currency.

iii. Considerations for the Financial Sector and offshore buffer

The discussion about capital flows is generally associated to its apparent corollary, the openness of the financial system. The usual approach has been to encourage China not only to reform, privatise, regulate and modernise its financial system starting with its. In fact, this was embedded in China's WTO accession negotiations and led to commitments to liberalise its financial system by the end 2006. Progress on the regulation and reforms front started only in the middle of 2005 with important restructuring of the weakest banks involving substantial capital injections. But the financial system remained largely closed to foreign participation to the great frustration of WTO members and the United States in particular which engaged in an intense lobbying battle for China's financial system liberalisation very similar to the one successfully brokered with Japan in the 1980s. What is striking though is the extent to which foreign participation and prudential policy, which are fundamentally different things, came to be merged under the vague concept of "*liberalisation*".

This push for *liberalisation* of China's financial sector echoed to a somewhat transparent business and US policy driven agenda[12] with limited considerations for financial stability. However, it came to shape the policy recommendations made by the US to Chinese authorities for most of the 2000s decade. These lobbying efforts were very much based on the hypothesis –or belief– that international financial institutions by their very nature carry with them macroeconomic and financial stability, that they improve capital allocation and can kick start a virtuous cycle of competition and self regulation capable of delivering positive productivity shocks[13]. The recent international experience of financial globalisation proves that this idea is at minimum an overstatement and that there are important caveats for emerging (and advanced) economies to be able to reap those benefits.
The specific case of Japan in the 1980s is very analogous and provides an acute challenge to the idea that the simultaneous combination of financial sector and financial account accelerated openness can be disastrous. The US administration then, concerned by the exchange rate misalignment of the yen, pushed the Japanese authorities into a number of reforms affecting the openness of the balance of payments and the reforms of the financial sector which eventually led to the "dollar-yen agreement" in 1984. As Frankel (1984) showed, this intended to open the Japanese capital markets and internationalise the yen with the objective of fostering FX appreciation and trade rebalancing. This policy didn't bring the desired results over the expected time window and led the US to press for coordinated FX interventions in order to appreciate the yen through the Plaza Accord in 1985 and then with the Louvres Accord in 1987. This eventually succeeded in strengthening the yen but fuelled a massive monetary expansion and an asset bubble in Japan. Its collapse in 1990 resulted in more than a decade of economic stagnation (Shirakawa (2011)).

China has studied a lot the Japanese experience and doesn't want to repeat some of its mistakes. Hence, it is very likely that China will be slow and reluctant to pursue a number of the reforms that were successfully imposed upon Japan. Indeed, despite intense US pressures, China's financial sector hasn't moved very much in the direction indicated. The current financial system remains centred on large state owned or controlled banks. The Chinese financial system (McKinsey Global Institute, 2004) can be characterized by:

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[12] Subramaniam (1998) has referred to such advocacy where both US and business interests converge by using the reference to a "Wall Street-Treasury complex"

[13] Indeed Treasury Secretary Paulson declared during the opening speech of the US-China dialogue: "*I am a very strong advocate of [China] opening up its capital markets to foreign investment. I believe that when they open up and let foreign competition in, the biggest beneficiary will be China, and it will mean more jobs in the financial services industry for the Chinese people. It will mean better training. It will mean more competitive capital markets that will have all sorts of other benefits for the economy…I can't think of a single example anywhere of a situation where a country has a strong capital market system and they haven't opened themselves up to competition.*"

- Bank dominance versus equity and debt markets (more than 80% of total assets)
- Deep financial system (Credit/GDP) is relatively high given China's level of economic development (high level of Credit/GDP per capita)
- Overwhelming Dominance of public sector banks
- High concentration of lending to State Owned Enterprises
- Low participation of private sector financial intermediaries

But the fragility of the banking system and the financial system as a whole is China Achilles' heel. China's financial policy is a cumbersome liability that will need to be managed over time. This will involve recapitalisation, restructuring and possible increased participation of private actors in financial intermediation but the outlook for enhanced foreign participation is unclear and its profound need remains questionable. Indeed, foreign experience and best practices can come through gradual openness but they can also more simply come through enhanced domestic reforms, China's acquisition of financial institutions in the US or in Europe or the hiring of hundreds of talented financial services professionals in surplus in the advanced world.

As discussed extensively in Mishkin (2007), one essential element of a successful transition to a more open financial account and one precondition to being able to reap the benefits of financial globalisation lies very much with the ability of the financial system to intermediate new inflows and manage potential outflows. In this regard, an integrated, well-regulated and effective financial system is essential but is missing in China. Chinese policymakers seem to have internalised this weakness and the resulting challenge. In fact, one could even argue that the path of internationalisation chosen (i.e. the reliance on an offshore centre like Hong Kong) acknowledges those risks and recognises the weaknesses and unsuitability of the domestic banking system to assume this responsibility at this stage.

The creation of the offshore market presents two important benefits in this respect. It allows maintaining a large degree of control over financial transactions and insulating, at least partially, the weaker domestic financial system. But it is also a defensive strategy, a first line of defence to guard Mainland China against the financial instability that could erupt at the intersection of a more porous financial account with such frail domestic financial institutions. In the meantime, Hong Kong and the other offshore centres that could be promoted (Singapore?) should be seen as both a levee to tame and manage inflows in a context of quasi-closed financial account and as a shadow financial system better managed and regulated than the one currently in place in Mainland China.

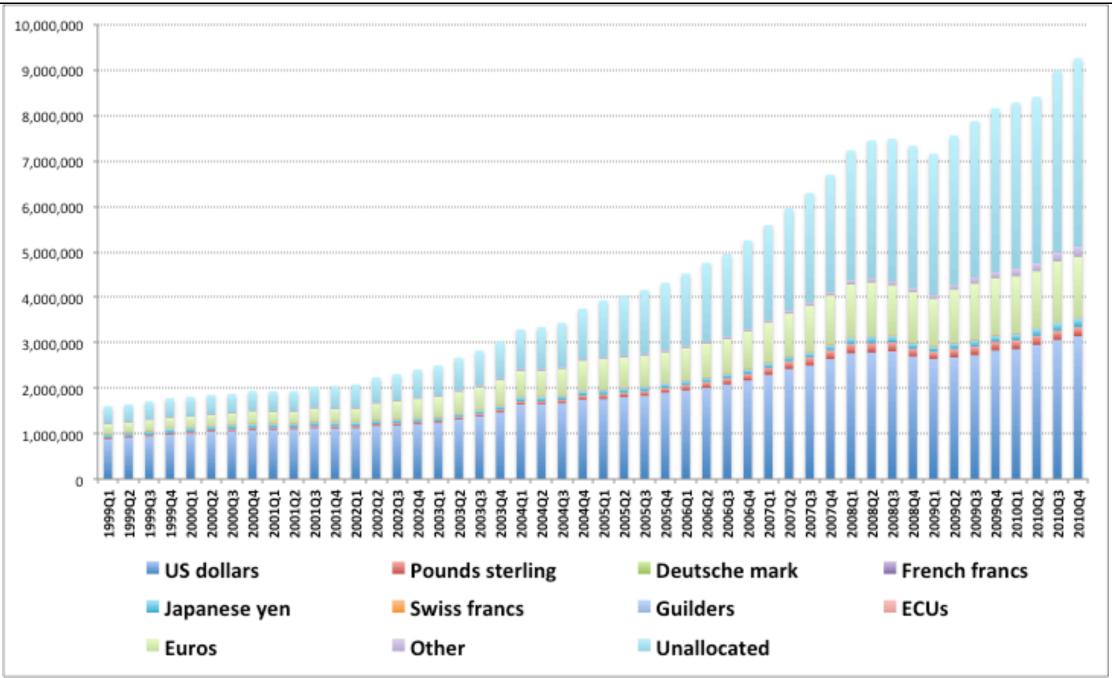
All in all, the issue of financial account openness is surely one important challenge for China in order to internationalise its currency but it is certainly not something that cannot be overcome or circumvented. The gradual relaxation of the financial account restrictions and the avoidance strategy developed to leverage the offshore RMB market and its underlying financial infrastructure are credible foundations on which the RMB can rely. But there are more challenges ahead, in particular even in a context where it expands through organic and market forces, it is unclear whether the RMB can move from being a widely international currency used for commercial and financial transaction to becoming a *bona fide* reserve currency that central banks chose as a reliable store of value.

2. Place of RMB in International Reserves

The RMB can extend its role quite substantially in a number of areas. But there are supply and demand constraints in the short term. First, the scope to supply a large amount of high rated liquid securities without abusing of financial engineering techniques and rating agencies' complacency appears limited. At the moment, only 2% of the already low stock of RMB assets is AAA rated and there isn't an obvious avenue for this to change. We could imagine that global central banks might accept to marginally tweak their credit standards in order to deliberately increase their exposure and diversification to China but they would certainly require having access to the onshore market in order to reduce their convertibility risk that is undeniably higher with the offshore market.

In this context, a reformed SDR could be another avenue to help lodge more RMB in global central banks' reserves. There seems to be some appetite from global central banks to move in that direction as demand for reserves grows (see Figure 8) and demand for diversification away from the USD increases even faster (see Figure 9).

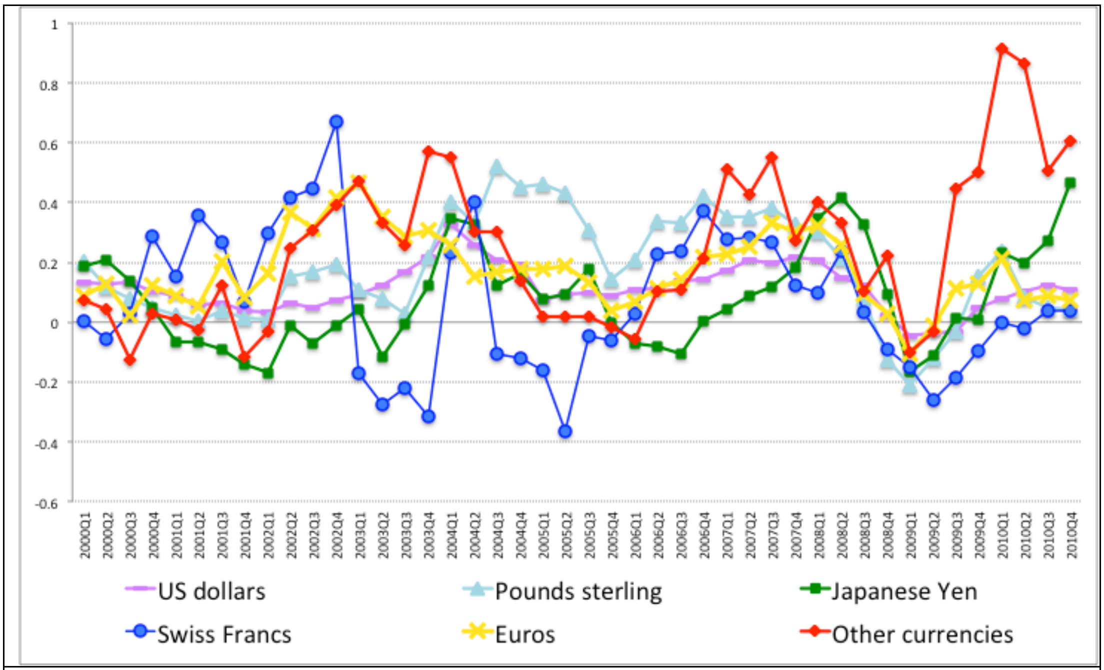
Figure 8: Global Reserve Assets (USD thousands)



Source: IMF (COFER)

This process is likely to gain traction but to remain relatively slow in comparison to the diversification interests and demands of the official sector. Indeed, the recent data on central bank reserves diversification suggest a very strong appetite for "other currencies" which are in fact mostly concentrated today on the Canadian and Australian dollars.

Figure 9 : Growth in Reserves by Currency Type (y/y, %)



Source: IMF (COFER)

i. Growing deep and high rated asset markets

One argument that is often opposed to the rise of the RMB is the impossibility for a net creditor country to issue a sufficiently large amount of high rated assets to serve as a unit of account for the world. The notion that there is a critical mass needed is very widespread and is probably very true. In addition, the savings glut hypothesis (see an augmented version of this argument in Bernanke (2011)) and the idea of global shortage of safe assets (see Caballero (2010)) suggest that this is not only an important feature of an international currency but also an essential stabilising feature of the international monetary system itself.

China in the short to medium term will probably be incapable to supplant or challenge the dollar or the euro in the issuance of high rated securities. But being a net creditor isn't a fundamental impediment to grow as an international currency. The experience of the US, which ascertained its role as the leading currency while it generated large current account surpluses is a prime example.

ii. SDR inclusion and convertibility

The SDR could be an ideal vehicle to promote this transition. There have been a number of discussions on the matter effectively started by Governor Zhou (2009) when he advocated for a global financial architecture based on the SDR as opposed to a unipolar one based on the dollar.
Yet, despite the debate that this speech has opened, it is not evident that Chinese authorities consider the question of the inclusion of the RMB in the SDR to be an utmost priority. It rather seems that they would consider this a potentially important development at a later stage in the internationalisation process. But this debate is probably unduly blurred by two distinct developments: (i) on one hand the inclusion of the RMB in the SDR in its current format (i.e. a passive reserve asset), (ii) on the other hand the potential enhanced role that the SDR could play in a reformed IMS through a change in its use (new role in trade

settlement, issuance of SDR denominated asset, unit of account in commodity markets). These two questions although clearly related should be approached separately.

Regarding, the inclusion of the RMB in the SDR basket, one frequent objection lies in the argument that a currency that is not fully convertible isn't technically able to take part in the SDR. This argument, although relatively popular, is inaccurate. Indeed, the IMF doesn't state anything with regards to full convertibility for currencies taking part in the SDR and there has been unconvertible currencies taking part in the SDR basket in the past. Instead, the IMF opposes the requirement to be "*freely usable*" which is in fact a very *ad hoc* judgement made by the Executive Board. As it stands, there would only be four currencies considered "freely usable" (i.e. the currencies taking part in the SDR). In fact, this qualification is very subjective and could change quite rapidly as a Board review of the SDR valuation noted in 2010.

In addition, as Matteos y Lago et al (2011) highlighted that: "*since the concept of freely usable currency was established in 1982, the SDR basket included a number of currencies that not only were not on the list of freely usable currencies, but also had restrictions on both current and capital account transactions"*. One could even argue that including those currencies that are not fully convertible would actually increase the demand for SDR as it would offer an avenue to access currencies that are not freely accessible. Hence, this cannot be durably held as an obstacle for the inclusion of the RMB in the SDR basket.

Figure 10: Historical composition of the SDR basket

	1969-1974	1974 - 1978	1978 - 1980	1981 - 1985	1986 - 1990	1991 - 1995	1996 - 1998	1999 - 2000	2001 - 2005	2006 - 2010	2011-
Gold (grams)	0.888671										
U.S. dollars		0.330	0.335	0.42	0.42	0.4	0.39	0.39	0.44	0.44	0.419
Euros								0.32	0.31	0.32	0.374
Deutsche marks		0.125	0.125	0.19	0.19	0.21	0.21				
Japanese yen		0.075	0.075	0.13	0.15	0.17	0.18	0.18	0.14	0.11	0.094
French francs		0.075	0.075	0.13	0.12	0.11	0.11				
Pounds sterling		0.090	0.075	0.13	0.12	0.11	0.11	0.11	0.11	0.11	0.113
Canadian dollars		0.060	0.050								
Italian lire		0.060	0.050								
Netherlands guilders		0.045	0.050								
Belgian francs		0.035	0.040								
Swedish krona		0.025	0.020								
Australian dollars		0.015	0.015								
Danish krone		0.015									
Norwegian krone		0.015	0.015								
Spanish pesetas		0.015	0.015								
Austrian shillings		0.010	0.015								
South African rand		0.010									
Saudi Arabian riyals		0.030									
Iranian rials		0.020									

Source: IMF

Note: Currencies' weight in the SDR basket

As a result, we argue that there is no strong basis to argue that currencies should be fully convertible before entering the SDR basket. The Board itself appears ready to allow the addition of non-fully convertible currencies and the RMB in particular. As Mateos y Lago et al (2011) noted, such an inclusion could be complemented by additional convertibility requirements between China and the other countries in the basket in order to ensure a smooth cross delivery of currencies and effective market making operations in the SDR. However, assuming this obstacle was lifted by making the "freely usable" criteria more transparent or by simply relaxing it, we would still have to contend with the fact that the

RMB remains largely pegged to the USD and this would therefore give a disproportionate place to the USD in the new SDR basket. But although this is an important obstacle, this is also something that the IMF has dealt with in the past. Indeed, currencies such as the Saudi Riyal or the Iranian Rials were once part of the SDR basket and largely pegged to the dollar. These points will need to be clarified before the next SDR valuation review in 2015 but could lead to the inclusion of the RMB in the basket then.

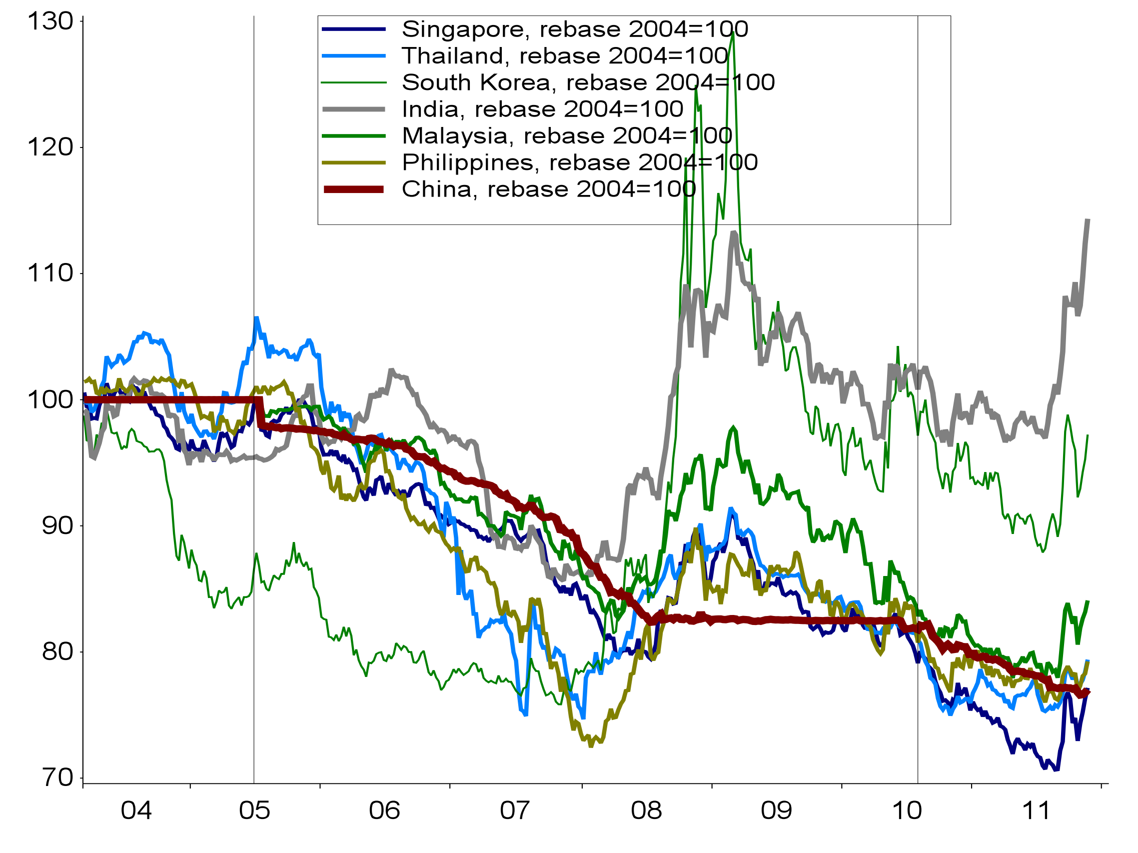
Hence, what appears more likely however is that the RMB slowly takes a bigger role on the world stage, possibly through its inclusion in the SDR basket. If this were to happen, it would be an important breakthrough with potentially deep ramifications, in particular:

- It would open an important crack in China's financial account by forcing China to deliver RMB to any central bank in the world that wishes to exchange its SDR. Indeed, countries taking part in the basket have fiduciary duties towards other central banks and agree to be market makers in the SDR basket.
- In addition, should this be insufficient, the IMF still has the power to force countries taking part in the basket to sell their hard currency reserves against SDR through the designation mechanism. This could be an avenue to lead China to reduce its reserves holdings by organising a sell of those hard currency reserves against SDR. This would in turn probably help china to reduce its exposure to the USD and smoothly diversity its currency reserves.

iii. Regional reach and internationalisation prospect

At first sight, the RMB has a limited role as a regional anchor. Empirical evidence that this is generally an essential features of any international currency and somewhat of a necessary step. Since the demise of the yen, there is no clear regional currency in Asia. However, the renminbi seems to gradually serve as a tacit anchor. Indeed, recent discussions at the Asian Development Bank about a joint appreciation for all Asian currencies suggest that there is *de facto* a notion of interdependence and mutual anchor. Episodes when the Chinese authorities let the RMB appreciate vs. the dollar are good moments to check the anchoring role that the RMB play in Asia. These periods tend to be accompanied by proportional appreciation of the currencies in the Asian block. Hence the formal anchor role of the RMB in the region isn't clear but it appears conceivable that in the event where the RMB were to float or be managed less firmly against the USD, the rest of Asia would follow, thereby establishing the RMB as a regional anchor (see Park and Song (2010)). Yet the question of regionalism will certainly need to be spelled out explicitly rather than indirectly. There are limited evidence so far that China would be actively pursuing a strategy of regional integration as a stepping stone to establish international stature for its currency. In this sense, the model of the euro area doesn't seem to apply and China gives the impression that it wants to leapfrog the regional step in its internationalisation process.

Figure 11: RMB vs. currencies of the Asia bloc, an anchor?



Source: Reuters

However, even without a regional policy, it is clear that China's central role in the regional supply chain creates a centre of gravity and that the competitive place of each country in the regional web of exchange is somewhat conditioned by its relative exchange rate vis-à-vis the RMB.

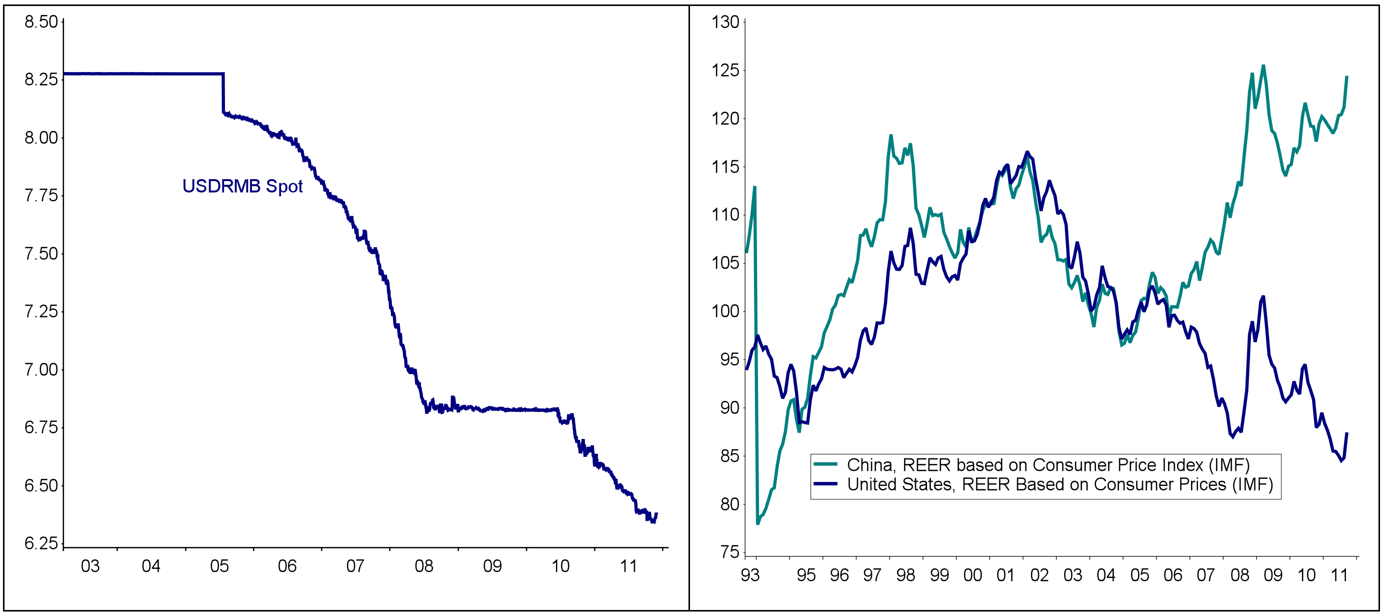
3. Openness and Currency Flexibility: The Horse and the Cart

We hope to have laid out somewhat clearly the extent to which the RMB could internationalise itself without substantial financial account openness. The remaining question is whether all of this can happen with limited currency flexibility. Contrary to an established literature (Prasad, Rumbaugh and Wang, 2005), we take the view that the flexibility of the exchange rate is in no way a first order prerequisite to the internationalisation of the RMB. A considerable part of the literature on China revolves around the question of the nominal exchange rate, which has hijacked that of the internationalisation of the RMB.

The ongoing rebalancing achieved through real developments suggests that even without a nominal exchange rate adjustment, which would arguably accelerate or facilitate the rebalancing process, there is in fact, quite a bit of rebalancing taking place already. Hence, setting as a starting point that currency flexibility is an essential if not first order condition to the expansion of the use of RMB internationally seems to be ignoring ongoing real developments and be grounded in a political assessment of the situation rather than in an economical one. Nominal appreciation has arguably been very slow although it has resumed since the middle of 2010 but real appreciation is happening rather fast (see Figure 12, chart

2) and probably even faster if we consider unit labour costs instead of consumer prices.

Figure 12 : Nominal and Real Effective appreciation of the RMB



Source: Reuters, IMF

Hence although we disagree with the sequencing proposed by the majority of the literature which argues that the horse (currency flexibility) needs to stand before the cart (financial account openness), we do share the view that currency flexibility is both desirable once a degree of financial account openness has been achieved and in fact that it is almost inevitable. Specific Chinese features (RMB offshore/onshore) could possibly make this process last longer than in other cases. But ultimately, the more porous the financial account becomes, the more rapidly it will precipitate an increase in domestic money supply, shifts in relative prices forcing monetary authority to either sterilise unrecorded inflows and/or let the currency rise to mitigate their effects and their size. Hence the key for China lies in keeping a firm grip on the valves that allow the onshore and offshore markets to exchange liquidity. Pegging to the USD doesn't appears to be necessarily an unsurpassable obstacle although it may certainly not be the path of least resistance or the solution that maximises global economic performance or even China's own economic output for that matter. This could well be a suboptimal strategy both for the world and for China but one that remains largely possible nonetheless.

In the long term (beyond 10 to 15 years from now) assuming the RMB would have reached a more established global presence, the question will be framed differently. In particular, by then the benefit of flexibility for China will certainly be clearer, its economy would have partially rebalanced undermining the current domestic vested interests that drive the need for the subsidy of exporting industries and stability might be less of an obsessive priority. Over that period of time, the Chinese authorities are likely to gradually shift from a monolithic peg to the USD to a form of effective exchange rate, which in its simplest form could be a peg against a basket or a broader effective exchange rate. All in all if we dispute strongly the need for currency flexibility as prerequisite to the process of internationalisation, in fact, we conclude that it could well be an outcome of the RMB's globalisation.

IV. Conclusion

Over the last two years, China has made a distinct push for the internationalisation of its currency. Conventional wisdom would suggest that any ambitious internationalisation ambition would quickly stumble on the relative closeness of the financial account, on the inflexibility of the exchange rate and on the lack of openness of the domestic financial system. We argue on the contrary that those challenges can be overcome.

It isn't very clear whether the current internationalisation process is part of an elaborate and cohesive strategy or whether it would unfold organically. Indeed, the policy environment in China is far less homogeneous and predictable than it seems and there are certainly still important divergences of opinion between the PBoC, the State Council and the Party's leadership on the matter. In addition, the current political transition ahead of the 2012 leadership change is probably unsuited to far reaching policy initiatives on this matter.
However, even in the absence of a strong policy impulse, the RMB seems to have already been put on tracks such that it could internationalise organically far more than is generally envisaged. We argue that with only minor modifications to the current policy framework, China would be able to raise the status of the RMB over and above that of the yen or even possibly the British Pound or the Swiss franc within the next 7 to 10 years.

However, China will face deeper-rooted challenges and important policy trade-offs on the road to the internationalisation of its currency. Those sequential challenges and the indicative timeline to resolve them are the following:

2 years	China will need to decide how comfortable it is with accommodating more (although controlled) participation in its domestic market, especially from Central Banks.
4 years	China will have to decide on the monetary role it intends to play regionally as a stepping-stone towards a more important international role. Establishing the RMB as a regional anchor with the responsibilities that it entails (such as lender of last resort and beacon of economic stability) will be necessary. One could see the multi-lateralisation of the Chiang Mai initiative and the central role that China intends to play in it as an important but insufficient step in this direction.
6 years	China will have to engage in a deep and wide reform of its financial system that may not necessarily involve enhanced foreign participation but which will require profound redesign of the current financial sector. This will have to include an end to financial repression and fiscal dominance, a deep regulatory overhaul, enhanced private sector involvement in the distribution and allocation of credit and modernisation and development of market infrastructures, which are currently substandard. The plan to establish Shanghai as a leading financial centre by 2020 potentially building on the lessons learned from Hong Kong and Singapore's experiences is important in this regard and will help to turn Chinese banks into global banks, which ought to be an important step in the internationalisation of the RMB.
10 years	If one subscribes to the savings glut hypothesis (Bernanke (2005), Caballero (2009)), for the sake of global financial stability and balanced growth, an issuer of an important reserve currency needs to issue a large amount of high quality assets (precondition for being a store of value). In this context, China will need to either succeed in its ongoing internal rebalancing (pension reform, education, healthcare) in order to decrease its savings ratio such that its net external

position gradually provides more space for substantial issuance of high graded securities. Or it will need to allow for capital account openness such that corporate and households invest more overseas creating large gross debt despite a net creditor position.

15 years It will need to establish an internationally trusted rule of law and a legal system that ensures predictability and enforceability of all legal claims. Some countries (United Arab Emirates) have decided to maintain their financial/business law separated from their standard legal systems in order to avoid the liberal principles of a free and fair trial that is necessary in business law from becoming a feature of the domestic national law. China could pursue this course eventually.

20 years It will have to embrace the idea of a bigger role and commensurate responsibilities in global financial and monetary affairs that will have to translate in a policy of international engagement either with the intention of establishing the RMB as the new unipolar anchor or with a conciliatory approach through a multipolar or multilateral system. This will mean a new form of international financial diplomacy with a more active leadership role in international financial institutions and in global policy forums (G20, WTO, IMF…)

If all those policy choices are taken in a way that is consistent with turning the RMB into a key international currency it could become a very serious challenger to the euro in 15 to 20 years in the context of a multipolar international monetary system or it could succeed in overtaking both the euro and the dollar as the hegemon within 25 to 30 years. However, each of those challenges is in fact, an important political trade-off, which Chinese authorities may not be able or willing to make at the right moment. If that were the case, the RMB would fail to raise itself to the standards of the dollar or the euro and realise its full potential, thereby impeding the scope for a truly multipolar international monetary system. Yet, we would continue to believe that the RMB would nonetheless establish itself as a leading second tier international currency with a growing *de facto* regional importance but not quite the regional gravity attached to the euro for it would still lack the inclusiveness and political aspirations that the European Union was designed to have.

V. Biblography

Abdelal, Rawi, "Freedom and Its Risks: The IMF and the Capital Account," Working Paper Series No. 05-056, 2005

Alesina, A, Grilli, V, Milesi-Ferretti, GM, The political Economy of Capital Controls, NBER Working Paper N 4353, May 1993

Aizenman, J. (2006), "On the hidden links between financial and trade opening", NBER Working Paper 9906, August 2003

Bergsten, F, The dollar and the deficits, Foreign Affairs 88, November/December 2009

Bernanke, B, Speech at the ECB annual Central Banking Conference, November 2010
http://www.ecb.int/events/conferences/html/cbc6/Global_Rebalancing.pdf

Bernanke, B., "The Global Saving Glut and the U.S. Current Account," remarks at the Sandridge Lecture, Virginia Association of Economics, Richmond, VA, 10 March, 2005.

Caballero, R. "The 'Other' Imbalance and the Financial Crisis," Paolo Baffi Lecture, Bank of Italy, Rome, December 2009.

Bhagwati, J, The capital myth: The difference between trade in widgets and dollars
Foreign Affairs, May/Jun 1998

Brune, N and Guisinger, *A, Myth or reality? The diffusion of financial liberalisation in developing countries*, Unpublished PhD Dissertation, November 2006

Cheung, Y-W, M D Chinn and E Fujii (2009a). "The illusion of precision and the role of the RMB in regional integration," in Koichi Hamada, Beate Reszat, and Ulrich Volz (eds), *Towards Monetary And Financial Integration In East Asia* (Cheltenham: Edward Elgar), Chapter 13, pp 325-356.

Cohen, Benjamin, Currency Choice in International Bond Issuance, BIS Quarterly Review, June 2005

Dobson, W and P Masson (2009), "Will the RMB become a world currency?" *China Economic Review* 20, pp 124-135.

Dobson, W, Kashyap, A, *The contradiction in China's Gradualist Banking Reforms*, Brookings Paper on Economic Activity, 2006

Dooley, M. P. and C. Walsh (2000), "Capital Controls and Crises: Theory and Experience", paper presented at AEA Meetings, 8 January 2000.

Eichengreen, B, *The Renminbi as an International Currency*, January 2010

Eichengreen, B and Frankel, J, 1996, "The SDR, Reserve Currencies, and the Future of International monetary System" in *The Future of the SDR in Light of Changes in the*

International Financial System, edited by Michael Mussa, James Boughton and Peter Isard, International monetary Fund, 1996.

Eichengreen, B & Flandreau, M, 2009. "The rise and fall of the dollar (or when did the dollar replace sterling as the leading reserve currency?)," European Review of Economic History, Cambridge University Press, vol. 13(03), pages 377-411, December

Eichengreen, B, Exorbitant Privilege, Oxford University Press, 2011

Fischer, S, Capital Account Liberalisation and the role of the IMF, Speech pronounced at the Conference on Development of Securities Markets in Emerging Markets, Inter American Development Bank, Washington DC, October 1997
http://www.piie.com/fischer/pdf/Fischer141.pdf

Gao, H and Yu, Y (2009). "Internationalisation of the RMB," paper presented to the BIS Bank of Korea conference, "Currency internationalisation: Lessons from the international Financial crisis and prospects for the future in Asia and the Pacific," 19-20 March 2009, Seoul.

Greenspan, A, Remarks by Chairman Alan Greenspan before the World Affairs Council, Dallas, Texas, December 2003
http://www.federalreserve.gov/boarddocs/speeches/2003/20031211/default.htm

Gourinchas, P-O. and Jeanne, O, "The Elusive Gains from International Financial Integration", *Review of Economic Studies*, vol. 73(3), 2006

Grilli, V and Milesi Ferretti, G, Economic Effects and Structural Determinants of Capital Controls, IMF Working Paper, WP/95/31, March 1995

Deng, X, Hafsi, T, Tian Z, *Internationalization of the largest 500 Chinese Firms : An explanatory Research*, Cahier de Recherche, HEC Montreal, January 2007

Jianzhong, G, Dagong Global Credit Rating, "The Strategic Choice of Chinese Credit Rating System" http://www.dagongcredit.com/dagongweb/english/rs/index.php

Jonhston, B, Tamirisa, N, Why do countries use capital controls?, IMF Working Paper, 1998
http://www.imf.org/external/pubs/ft/wp/wp98181.pdf

Kose, M, Prasad, E, Rogoff, K, Wei, S-J, Financial Globalisation: A reappraisal, IMF Staff papers 56, 2009

Li, David Daokui and Linlin Liu, 2007, "RMB Internationalization: An Empirical Analysis," Presentation at Hong Kong Institute of Monetary Research Conference: *Currency Internationalization: International Experiences and Implications for the RMB*, 15-16 October, 2007, Hong Kong.

Lane, P, Milesi-Ferretti, GM, *The External Wealth of Nations Mark II: Revised and Extended Estimates of Foreign Assets and Liabilities*, IMF Working Paper WP06/09, 2009
http://www.imf.org/external/pubs/ft/wp/2006/wp0669.pdf

Lane, P R and J C Shambaugh (Forthcoming). "Financial exchange rates and international

Currency exposures," *American Economic Review*.

Mateos y Lago, I, Enhancing International Monetary Stability—A Role for the SDR?, January 2011
The paper was prepared by a team led by I. Mateos y Lago and comprising S. Maziad, A. Piris, and I. Asmundson (all SPR), under the guidance of Ranjit Teja.
http://www.imf.org/external/np/pp/eng/2011/010711.pdf

Mody, A., Murshid, A. P. "Growing up with capital flows," *Journal of International Economics,* 2005.

Miniane, J, A new set of measures on capital account restrictions, IMF Staff Papers Vol 51 No 2, 2004

Ostry, J, Ghosh, A, Habermeier, K, Chamon, M, Qureshi, S and Reinhardt, D, Capital Inflows: What tools to use?, IMF Staff Position Note SDN 1106, April 2011
http://www.imf.org/external/pubs/ft/sdn/2011/sdn1106.pdf

Ostry, J, Ghosh, A, Habermeier, K, Chamon, M, Qureshi, S and Reinhardt, D, Capital Inflows: The Role of Controls, IMF Staff Position Note SDN 1004, February 2010
http://www.imf.org/external/pubs/ft/spn/2010/spn1004.pdf

People's Bank of China and International Monetary Fund (2009). *Note purchase agreement between the People's Bank of China and the International Monetary Fund*.

Prasad, Eswar, Rajan, Raghuram G, and Arvind Subramanian, "Foreign Capital and Economic Growth," Brookings Papers on Economic Activity, 2007, 1, 153-209.

Quinn, Dennis,. "The Correlates of Change in International Financial Regulation," American Political Science Review, 1997

Quinn, Dennis, "Capital Account Liberalization and Financial Globalization, 1890 – 1999: A Synoptic View," International Journal of Finance and Economics, Vol. 8, No. 3, p. 189-204. 2003

Yu, Y (2008). "Panda bonds could help China avoid the risks of US Treasury bonds," East Asia Forum, http://www.eastasiaforum.org/2008/12/19/panda-bonds-could-help-china-avoidthe-risks-of-us-treasury-bonds/.

Hai, Wen, 2007, "Pros and Cons of International Use of RMB for China," Presentation at Hong Kong Institute of Monetary Research Conference: Currency Internationalization: International Experiences and Implications for the RMB, 15-16 October, 2007, Hong Kong.

Hausmann, Ricardo, Dani Rodrik, Andres Velasco, "Growth Diagnostics," in D. Rodrik, One Economics, Many Recipes: Globalization, Institutions, and Economic Growth, Princeton University Press, 2007

Chen, Hongyi ; Peng, Wensheng, Shu, Chang, (2009), *The Potential of the RMB as an International Currency,* Hong Kong Institute for Monetary Research, Hong Kong Monetary Authority, February 2009

Genberg, Hans, (2009) Currency Internationalisation: Analytical and Policy Issues, HKIMR Working Paper No.31/2009, October 2009

Gourinchas, Pierre Olivier, and Olivier Jeanne, "Capital Flows to Developing Countries: The Allocation Puzzle," November, 2007

Kaway, M and Takagi, S, *The RMB as a key international currency?: Lessons from the Japanese experience*, Notes prepared for the Asia Europe Economic Forum, 10-11 January 2011,

Kaway, M, *From Chiang Mai Initiative to Asian Monetary Fund*, ADBI Institute, Paper prepared for the "Future of the Global Reserve System" Conference held in Tokyo on March 2010

Kose, Prasad and Taylor, Threshold in the process of international financial integration, Brookings Paper On Economic Activity, 2009
http://www.brookings.edu/~/media/Files/rc/papers/2009/05_international_finance_prasad/05_international_finance_prasad.pdf

Li, Jing, (2004), *Regionalization of the RMB and China's Capital Account Liberalization*, China & World Economy / 86-100, Vol. 12, No. 2, 2004

Li, Jing (2008), *RMB as a Regional International Currency: Cost benefit Analysis and Roadmap*, (to be published)

Ma, G and McCauley, R, Do China's capital controls still bind? Implications for monetary autonomy and capital liberalisation, BIS Working Papers No 233, August 2007
http://www.bis.org/publ/work233.pdf

McKinsey Global Institute, Putting China's Capital to work: The value of financial system reform, May 2006
http://www.mckinsey.com/mgi/reports/pdfs/china_capital/MGI_chinacapital_fullreport.pdf

Mishkin, F, *The Next Great Globalization: How Disadvantaged Nations can Harness their Financial Systems to Get Rich*, Princeton, NJ, Princeton University Press, 2006

Ostry, J, Ghosh, A, Habermeier, K, Chamon, M, Qureshi, M and Reinhardt, D, "Capital Inflows: The Role of Controls", IMF Staff Position Note, SPN/10/04, February 19, 2010

Park, Y and Song, C, "RMB Internationalization: Prospects and Implications for Economic Integration in East Asia", *Asian Economic Papers*, October 2010

Prasad, E, Rumbaugh, T and Wang, Q, *Putting the Cart Before the Horse? Capital Account Liberalisation and Exchange Rate Flexibility in China*, IMF Policy Discussion Paper, PDP05/1, 2005
http://www.imf.org/external/pubs/ft/pdp/2005/pdp01.pdf

Rodrik, Dani, Arvind Subramanian, and Francesco Trebbi, "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development," Journal of Economic Growth, 9(2), June 2004

Rosen, Daniel and Hanemann, Thilo, China's Changing Outbound Foreign Direct Investment Profile: Drivers and Policy Implications, Peterson Insitute Policy Brief N09 14, June 2009
http://www.iie.com/publications/pb/pb09-14.pdf

Schindler, M, Measuring Financial Integration: A New Data Set, IMF Staff papers 56, April 2009

Subramaniam, A, Eclipse: Living in the shadow of China's economic dominance, Peterson Institute of international Economics, 2011

Tarapore Committee, Report of the Committee on Capital Account Convertibility, Reserve Bank of India, 1997
http://www.rbi.org.in/scripts/PublicationReportDetails.aspx?FromDate=06/26/00&SECID=4&SUBSECID=27

Tarapore Committee, Report of the Committee on Fuller Capital Account convertibility, Reserve Bank of India, 2006
http://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/72250.pdf

Tavlas and Ozeki, *The internationalisation of currencies: An appraisal of the yen*, Occasional IMF paper 90, 1992

Truman, Ted, Comment on Will the Euro euro surpass the dollar as international reserve currnency? By Menzie Chinn and Jeffrey Frankel in G7 *Current Account Imbalances: Sustainability and Adjustment*, Chicago University Press, 2007

US-China Business Council, China's Financial Sector Reform and Market Openings: An Overview and Assessment, August 2006
http://www.uschina.org/public/documents/2006/08/financial-sector-reforms.pdf

Xiacochuan, Z, *Reform of the International Monetary System*, People's Bank of China, March 2009
http://www.pbc.gov.cn/publish/english/956/2009/20091229104425550619706/20091229104425550619706_.html

Wangl, JY, *What Drives China's Growing Role in Africa?,* IMF Working Paper, October 2007

Rodrik, D, Subramaniam, A, *Why did financial globalisation disappoint?*, Peterson Institute for International Economics, March 2008
http://www.iie.com/publications/papers/subramanian0308.pdf