

Capital Account Liberalization and the Role of the Renminbi

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Abstract

Despite an erosion of consensus on its benefits, capital account convertibility remains a long-term goal of China. This paper identifies three major preconditions for convertibility in China: a strong domestic banking system, relatively developed domestic financial markets, and an equilibrium exchange rate. The authors examine each of these in turn and find that, in significant respects, China does not yet meet any of the conditions necessary for convertibility. They then evaluate China's progress to date on capital account liberalization, including recent efforts to promote renminbi internationalization and greater use of the renminbi in trade settlement. The paper concludes with an overview of remaining obstacles to convertibility and policy recommendations.

Key words: capital account, China, renminbi

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For many years, the conventional wisdom among economists was that capital account convertibility provides countries unambiguous economic benefits via both improved capital allocation and increased opportunities to smooth consumption via international borrowing. This wisdom, it turned out, was based primarily on an a priori argument rather than supported strongly by empirics. Some attempts to demonstrate a linkage between international financial integration via capital account convertibility, on the one hand, and economic growth, on the other, have been disappointing at best (Eichengreen 2001; Prasad and Rajan 2008). Moreover, substantial evidence has accumulated that under some circumstances the introduction of capital account convertibility can precipitate financial crises. Finally, in some cases, such as during the Asian Financial crisis of the late 1990s, countries that had retained strong capital controls came through crises better than those that had liberalized earlier. More generally, across a large number of crisis episodes countries with capital controls in place prior to the outbreak of a crisis suffered significantly lower drops in real economic output than countries without such controls.

Despite the erosion of consensus on its economic benefits, capital account convertibility remains a long-term goal for China. The goal of “gradually realizing convertibility of the capital account” is explicit in the Twelfth Five-Year Program, which was approved by the Central Committee of the Chinese Communist Party on October 18, 2010.¹ Earlier the goal of capital account convertibility was implicit in the State Council’s objective of making Shanghai an international financial center by 2020.² And it is consistent with China’s campaign to increase the international use of the Chinese currency, discussed further below. Moreover, several high government officials have endorsed capital account convertibility. Yi Gang, Vice-Governor of the People’s Bank of China and concurrently the director of the State Administration of Foreign Exchange, in an interview with Caixin in the summer of 2010 stated that “a convertible yuan remains the ultimate goal for the nation’s currency exchange rate reform.”³ Vice-Governor Yi noted that most countries achieve capital account convertibility within 7 to 10 years after making their currencies convertible for current account transactions. China achieved the latter in December 1996, but Yi explained that China’s longer than usual transition was due to its size and unbalanced development.

PRECONDITIONS FOR CAPITAL ACCOUNT CONVERTIBILITY

Broadly speaking there are three important preconditions for moving to capital account liberalization: a strong domestic banking system, relatively developed domestic financial markets, and an equilibrium exchange rate. We examine each of these in turn.

Strength of the Domestic Banking System

The first precondition for capital account convertibility is a strong domestic banking system. When capital controls are relaxed typically domestic residents (or financial institutions holding funds on behalf of domestic residents) diversify the currency composition of their assets, leading to an outflow of funds from the domestic banking system. When a country's banking system is perceived as weak, opening the capital account can accelerate these outflows as depositors move funds to the presumed relative safety of foreign banks. If sufficiently large, these outflows, in turn, can lead to a sharp decline in the value of the domestic currency. If there are currency mismatches under these conditions, firms and individuals with foreign-currency denominated debts but income denominated only or largely in domestic-currency will experience a sharp increase in the burden of servicing their loans, potentially leading to a broad financial crisis. This concern is particularly salient in China where bank deposits by year-end 2009 reached RMB61.2 trillion (US\$8.96 trillion),⁴ an extraordinary 183 percent of GDP (People's Bank of China, Monetary Analysis Small Group 2010, 1).⁵ More than 90 percent of these deposits are controlled by households and non-financial corporations. These deposits are most likely to migrate out of Chinese banks in anticipation of or in the early stages of a crisis.

China's banks now appear to be enormously stronger than they were in the mid-1990s when the largest financial institutions were insolvent, leading ultimately to massive government injections of capital and a write off of the non-performing loans that had accumulated in the banking system over many years (Lardy 1998, 5; Ma Guonan 2006). Following these write-offs, the authorities engineered reforms in the governance of China's largest banks, further injections of capital by foreign strategic investors, and public listings of bank shares on the Hong Kong and Shanghai stock markets.

The financial transformation of the banking system that resulted is reflected in three key indicators. First, total non-performing loans of China's major commercial banks came down sharply from RMB2,104 billion (US\$254 billion) and 18 percent of loans outstanding at year-end 2003 to only RMB426 billion (US\$62 billion) and 1.6 percent of loans outstanding by year-end 2009. Second, in 2003 only 8 domestic banks accounting for a mere 0.6 percent of total banking assets met China's minimum capital adequacy requirement, which then was 8 percent. This rose to 239 banks accounting for 100 percent of total banking assets by the end of 2009, when the risk-weighted average capital adequacy ratio of China's banking industry was significantly higher at 11.4 percent. Third, in 2009 after-tax profits of the banking industry as a whole were RMB670 billion (US\$98 billion), with the return on average equity at 16.2 percent and return on average total assets at 0.9 percent (China Banking Regulatory Commission 2009, 30-32, 127). These numbers on returns compare extremely favorably with well-regarded international banks such as HSBC and Standard Chartered.⁶

A number of questions could be raised as to whether these data truly reflect strong Chinese bank performance. Are bank capital adequacy ratios overstated by allowing dubious assets to be included in bank capital or by dodgy risk weighting? Probably not significantly. Regarding bank capital, for example, the regulator, the Chinese Banking Regulatory Commission (CBRC), allowed banks to issue subordinated debt and count it as part of their tier-two capital starting in 2004. During the global financial and economic crisis, when bank lending in China soared, Chinese banks maintained their capital adequacy ratios by sharply stepping up their issuance of subordinated debt. But it eventuated that the banks were merely selling much of this debt to each other.⁷ The regulator, recognizing that these cross-holdings of subordinated debt did nothing to increase capital in the banking system as a whole, ruled in a matter of months that subordinated debt held by other banks could not be counted as part of a bank's capital.⁸ Instead, in 2010 the CBRC compelled China's four major banks to raise RMB 264.4 billion (US\$39.1 billion) in new capital via rights issues and the sale of convertible bonds.⁹ With regard to risk weighting of assets, the CBRC eliminated more than a decade ago such dodgy procedures as allowing banks to hold little or no capital against loans made to state-owned companies.

Are profits overstated because of lax loan classification standards and weak provisioning requirements? Again, probably not significantly. The CBRC modeled China's loan classification scheme on international standards and has imposed tough provisioning requirements. By year-end 2009 loan-loss provisions set aside by commercial banks stood at RMB663 billion (US\$97 billion), putting the provisioning ratio at 155 percent, up dramatically from only 20 percent in 2003 (China Banking Regulatory Commission 2010, 131).

Thus weak prudential and regulatory standards are not likely to result in a major over-statement of Chinese bank earnings.

The more relevant question is to what extent is bank income inflated by the central bank's control of interest rates? The People's Bank of China has controlled the interest rate structure for both deposits and loans of commercial banks for many years. Partial liberalization, which took the form of allowing increasing upward flexibility from benchmark lending rates began as early as 1997 when banks were allowed to adjust lending rates upward from benchmark rates by as much as 20 percent. This process culminated in the fall of 2004 when the central bank eliminated the ceiling on lending rates.¹⁰ But the authorities have not subsequently increased the flexibility around the benchmark lending and deposit rates. Notably benchmark deposit rates set by the central bank remain a hard constraint on the up side. This protracted stall in interest rate reform seems somewhat surprising given Premier Wen Jiabao's statement at the National People's Congress in the spring of 2009 that China "will carry forward market-based reform of interest rates."¹¹

The potential flattering effect of central bank control of the interest rate structure on bank earnings arises because the central bank sets a floor on bank lending rates but a ceiling on bank deposit rates. Thus the central bank directly controls the spreads that banks earn on their deposit taking and lending activities. Measuring the effect of the central bank's control of interest rates has been a key issue in the assessment of Chinese bank performance by outside analysts for many years. The magnitude of the impact of central bank control of interest rate on bank earnings was acknowledged by Xiao Gang, the Chairman of the Bank of China (China's 4th largest bank by assets). In a posting on the bank's web site he acknowledged that because of the central bank's control of interest rates the net interest margins Chinese banks earn on their renminbi loans are almost double what they would earn in a liberalized interest rate environment.¹²

If Xiao Gang's estimate that interest rate liberalization would cut the net interest margins of Chinese banks by as much as half is correct, what would this mean for Chinese bank earnings? Clearly net interest income would fall by almost half. Since net interest income accounted for 63 percent of the profits of banking institutions in 2009, central bank control of the interest rate structure could be said to result in an inflation of bank profits by as much as 45 percent (China Banking Regulatory Commission 2010, 32). Similarly, interest rate liberalization would reduce reported return on equity and return on assets by the same proportion. In short, interest rate liberalization would reduce bank earnings substantially and Chinese bank performance would look much weaker in comparison with international peers.

The central bank's control of the structure of interest rates results in financial repression that imposes a heavy implicit tax, particularly on the household sector (Lardy 2008). In China's banking system at year-end 2009 the non-financial corporate sector was a slightly larger source of deposits than were households. But the non-financial corporate sector was actually a net borrower. Households supplied slightly less deposits than corporates, but households were a large net depositor since total household borrowing at year-end 2009 was less than a third of household deposits. In 2009-2010 banks paid only 0.36 percent on demand deposits and rates ranging from 1.71 percent on three-month time deposits to as much as 3.60 percent on five-year time deposits.¹³ The average cost of household deposits in 2009 was 1.94 percent, 1.78 percent, and 1.52 percent at the Industrial and Commercial Bank of China, the China Construction Bank, and China Merchants Bank, respectively. But, as reflected in Table 1, at the same banks the average yield on loans to households was 4.93 percent, 5.37 percent, and 5.07 percent, respectively.

Table 1 Net Interest Rate Spreads

	Total ¹	Households ²
ICBC	2.16	2.99
CCB	2.30	3.20
Merchants	2.15	3.55

1. The yield on the average annual balance of interest-generating assets less the cost of the average annual balance of interest-bearing liabilities.
 2. The average percent yield on personal loans less the average cost of household deposits.

Sources: Industrial and Commercial Bank of China Ltd., 2009 Annual Results Announcement, pp. 4, 14, 16. China Construction Bank Corporation, Annual Report 2009, pp. 23, 25-26. China Merchants Bank Co. Ltd., Annual Report 2009, pp. 26-28.

These numbers mean that these banks achieved spreads on lending to households that exceeded the net interest spread these banks enjoyed on their entire range of assets and liabilities by approximately two-fifths to two-thirds. This differential arose for two reasons. First, these banks held other assets that earned much less than their earnings on lending to households. For example, they earned only 1.6 percent on required reserves placed at the central bank and only slightly more on their large holdings of bonds issued by the central bank to sterilize increases in the domestic money supply resulting from its intervention in foreign exchange markets.¹⁴ And second, banks had to pay substantially higher interest rates on some of their liabilities than they paid on household deposits. For example, in 2009 the China Construction Bank paid 3.81 percent interest on the bonds it issued, more than twice what it paid on household deposits.

To summarize, Chinese banks are highly dependent on their business with households for two reasons. First, the net interest spreads on this business are much higher than the net spreads that banks achieve on their other activities. And second, households are the dominant source of bank funding. If China liberalized the capital account under these conditions, the banks might be compelled to raise deposit rates to prevent large outflows of deposits, particularly from the household sector. This could have a highly adverse effect on bank earnings. According to our calculations, an increase in the average deposit rate of only 110 basis points in 2009 would have eliminated all bank profits.

Thus interest rate liberalization is an important precondition for capital account liberalization for two reasons. First, as the above analysis suggests, it is essential to gradually reduce and finally eliminate financial repression prior to liberalizing the capital account. Otherwise depositors, particularly households, may shift their funds out of the domestic banking system, potentially creating a liquidity crisis for the banking system.

Second, in the long-run interest rate liberalization is essential to the strengthening of China's banking system. As long as banks operate in a highly cosseted interest rate environment, competition in the banking system will remain limited and banks will have insufficient ability and incentive to price risk appropriately and operate on a commercial basis. Thus the allocation of funds by the banking would remain less efficient than would be the case if banks operated in a liberalized interest rate environment.

Level of Development of the Financial System

A second prerequisite for the liberalization of the capital account is a well-developed capital market. There are at least two reasons for this. First, capital markets can provide an additional source of funding for the corporate sector thereby providing more competition for domestic banks and hastening the banks' transition to operation on a fully commercial basis. Second, deeper local debt markets make it easier for a country to ease restrictions on capital flows because deep markets make it easier to absorb large capital

inflows without creating asset bubbles in local markets. Finally, if local capital markets are underdeveloped when capital restrictions are eased domestic firms may borrow funds abroad, creating the possibility of currency and maturity mismatches.

While China has a significant market for government bonds, the local market in corporate debt is not well developed. The magnitude of funds raised through the corporate debt market is small, especially when measured against the funding provided to the corporate sector through the banking system. Moreover, issuance is dominated by a handful of large state-owned institutions, notably the Ministry of Railroads and the major banks. At the end of 2007 the total value of non-financial corporate bonds outstanding was only RMB768.3 billion (US\$105.2 billion) (Chinese Securities Regulatory Commission 2008, 6-9).¹⁵ That was only 3 percent of the RMB22.7 trillion (US\$3.11 trillion) outstanding in bank loans to non-financial corporations and also less than 3 percent of 2007 GDP. By year-end 2009 non-financial corporate bonds outstanding grew by about two-fifths to reach RMB1,097 billion (US\$161 billion) (Asian Bond Monitor 2010, 46). But bank loans outstanding to non-financial corporations had expanded even more rapidly to reach RMB34.4 trillion (US\$5.0 trillion) so non-financial corporations were even more dependent on bank loans for their financing than they had been in 2007.

In contrast with the corporate bond market, the foreign exchange forward and swap transactions markets have developed rapidly in recent years. An over the counter forward market emerged as early as 1997. But with a fixed exchange rate vis a vis the dollar and the vast majority of foreign trade transactions denominated and settled in dollars, the volume of transactions was modest. However, following depegging of the renminbi to the dollar in mid-2005, China launched an interbank foreign exchange forward market and in the following year formally introduced foreign exchange swap transactions. These markets allowed Chinese exporters and importers to hedge the foreign exchange risk inherent in an environment of increased renminbi volatility. Volume in these two markets combined grew rapidly, reaching \$460 billion by 2008 and almost doubled in 2009, reaching \$810 billion (People's Bank of China Monetary Analysis Small Group 2010, 26).

Flexibility of the Exchange Rate

A third precondition for a successful transition to capital account convertibility is an exchange rate that is reasonably close to its underlying equilibrium level. A move to capital account convertibility when an exchange rate is substantially under- (over-) valued will precipitate capital in (out) flows that can be destabilizing. The preponderance of evidence suggests that the renminbi is significantly undervalued. A survey of 18 studies of the Chinese exchange rate found that: all but one concluded that the renminbi was undervalued; the average estimate of the needed appreciation in the real effective exchange rate was

19 percent; and that the needed appreciation of the real exchange rate was higher for those studies based on data from the period 2005-2007 than studies based on data from the period 2000-2004 (Cline and Williamson 2008, 131-132). More recently Cline and Williamson pegged the renminbi undervaluation at 21 percent and 14 percent (both on a real effective basis) in 2009 and 2010, respectively (Cline and Williamson 2009; Cline and Williamson 2010).

In addition to these direct estimates of the degree of undervaluation, Chinese government intervention in the foreign exchange market to prevent the renminbi from appreciating also clearly suggests that the renminbi is undervalued. This intervention has led to a buildup of official foreign exchange reserves, from \$412 billion at year-end 2003 to \$2,850 billion at the end of 2010, that is unprecedented in global history. The vast bulk of this build up is attributable to China's surpluses on current account rather than to surpluses on the capital and financial account as a result of net inflows of foreign direct investment, portfolio capital, and so forth.¹⁶ The magnitude of the official intervention in the foreign exchange market is so large that it strongly suggests that the government has made little or no progress in making the value of the exchange rate based more on "market supply and demand," a goal enunciated in July 2005.¹⁷ Equally unprecedented in the history of the international monetary system is the large-scale open market operations that the central bank has undertaken to partially sterilize the domestic monetary expansion caused by foreign exchange intervention (Cappiello and Ferrucci 2008, 16-17). This, in turn, has prevented real appreciation of the renminbi via the price mechanism.

PROGRESS TO DATE ON CAPITAL ACCOUNT LIBERALIZATION

While China achieved full current account convertibility in late 1996, its progress on capital account convertibility has proceeded slowly and in discrete stages. In December 1993, China's authorities publicly stated that, "The long-term goal of China's foreign exchange reforms is to realize the convertibility of the renminbi. In order to reach this goal, we must move gradually and in the proper sequence of events" (Hu Xiaolian 2009) In effect this has meant achieving convertibility on current account transactions before capital account transactions and loosening restrictions on capital inflows before loosening restrictions on capital outflows.

In the decade following China's reform and opening, the government showed a new willingness to use foreign capital to fund domestic investment. The majority of this capital came in the form of foreign loans from international financial institutions, such as the IMF and the World Bank, and foreign governments. China's objective was to attract long-term stable forms of investment and take advantage of favorable lending rates abroad. These loan inflows marked a major policy shift but remained modest in size, reaching a peak of just 1.68 percent of GDP in 1990.

China took more significant steps toward liberalization when it loosened constraints on foreign direct investment (FDI) beginning in the early 1990s. These liberalization policies included: 1) shifting decision-making power regarding the screening and approval of FDI from the central government toward local governments; 2) relaxing ownership restrictions away from joint-venture requirements and allowing a greater proportion of FDI to come from wholly-owned foreign enterprises; 3) increasing managerial autonomy relating to pricing and financial decisions; 4) offering concessions on customs duties, income taxes, and taxes on profit remittances; and 5) relaxing sectoral controls and opening up the services sector, including the banking, retailing and telecommunications industries.

Inward FDI in manufacturing is now almost completely liberalized in China with the exception of restrictions in some “strategic” sectors and, in some cases, limits on the extent and form of foreign ownership. There are more restrictions on FDI in China’s service sector, particularly telecommunications and financial services including banking, insurance, and securities. Foreign companies are permitted to make withdrawals from their foreign exchange accounts and convert local currency to make external current account payments of profits and dividends so long as the payments are consistent with their business scope, and, in the case of joint venture companies, approved by the firm’s board of directors. China’s relatively accommodative stance has made it the world’s second largest destination for FDI.

China’s recent measures to further liberalize FDI in response to the global economic crisis reflect the major role that FDI has played in driving economic growth over the past thirty years. When FDI inflows reached their peak in 2008, foreign invested enterprises made up just 3 percent of total enterprises, yet contributed to 30 percent of China’s total industrial output value, 21 percent of total tax revenues, and 55 percent of total exports.¹⁸ This trend reversed due to the global financial crisis when FDI growth fell from 20 percent in 2008 to negative 13 percent in 2009, the first time that FDI growth had turned negative in a decade.

To stabilize and expand FDI inflows, in July 2009 the Ministry of Commerce submitted a 42-point proposal to the State Council containing a number of policy recommendations, including measures to further delegate FDI examination and approval rights and to relax the examination and approval process for individual foreign investments. Of particular significance was a proposal to simplify and moderately relax the foreign exchange registrations procedures imposed on foreign investors who invest in Chinese real estate enterprises, thereby easing the so-called “foreign capital restraining order.”¹⁹ There were also proposals to adjust the catalogue of permitted uses for foreign investment and give local governments more latitude to use preferential policies to attract foreign capital.

The Chinese government initially focused on designing policies to attract inbound foreign investment and gave little attention to promoting outbound FDI (OFDI). More recently, however, the authorities have begun to view OFDI as a valuable way to secure commodities needed for growth and

further integrate China into the global trading system. The demand for foreign exchange associated with ODFI could slow the pace of accumulation of official holdings of foreign exchange and also provide a way for China to diversify its foreign investments away from U.S. Treasuries.

This more favorable stance toward OFDI emerged clearly in 1999 when the government announced the breakthrough “Go Global” policy with the primary goal making it easier for domestic firms to secure commodities abroad. Over the past decade, government agencies relaxed restrictions on ODFI and actively supported firms going abroad through subsidies, tax breaks, and improved access to financing. For example, the Ministry of Commerce (MOFCOM) gradually eased approval procedures over time by delegating greater responsibility to local agencies. In May 2009, it introduced new project approval rules to reduce approval time, lift value thresholds, and increase the authority of local MOFCOM branches. Similarly, the CBRC issued guidelines in December 2008 allowing commercial banks to provide loans to firms for use in cross-border M&A.

In addition, the State Administration of Foreign Exchange (SAFE) has provided domestic firms with easier access to foreign exchange by relaxing capital controls over time and has provided firms investing with more opportunities to raise capital. SAFE draft regulations, published in May 2009, allow domestic firms to register the source of their foreign exchange financing after their investment overseas rather than requiring approval in advance.²⁰ These new rules also permit firms to raise capital from more sources, including domestic foreign exchange loans, foreign exchange purchased with renminbi, foreign currency funds already possessed by the firm, and retained profits from overseas.

Yet, China’s investment outflows are dwarfed by FDI inflows and its ODFI remains low by most measures.²¹ In 2009, China’s share of global ODFI flows was 4 percent and by year-end its share of the stock was 1.2 percent—a significant increase compared to previous years but still small considering China is now the world’s second largest economy.²² Overseas FDI assets as a share of GDP were less than 5 percent in China in 2009, compared to 6 percent for India, 10 percent in Brazil, and 26 percent in Russia.

While China opened itself up to FDI inflows from a relatively early stage and liberalized OFDI starting in the late 1990s, measures to liberalize portfolio flows have remained quite limited. China’s Qualified Foreign Institutional Investor (QFII) program, adopted in 2002, allows a limited number of foreign institutional investors to invest in a specified range of Chinese domestic financial assets. The program sets quotas on inbound portfolio investment for each participating foreign institution as well as a quota on the overall size of the QFII program. To encourage long-term investments in the capital markets and discourage sudden capital outflows, (SAFE) initially permitted QFIIs to offer only closed-end funds and subjected their investments to a three-year lock-up period before the full amount placed could be withdrawn and repatriated. Since then SAFE has permitted QFIIs to offer open-end funds and has

significantly relaxed restrictions on repatriation. But the authorities continue to attempt to influence the composition of capital flows by imposing higher minimum capital requirements on banks and securities companies than on mutual funds and insurance companies.

The QFII scheme was small at its inception and has been allowed to expand only marginally. As of December 2010 the authorities had licensed 97 foreign institutions to participate in the program. The authorities raised the global ceiling from \$10 billion when the program began to \$30 billion at the end of 2007 and increased the maximum initial investment amount for each new institutional investor from \$800 million to \$1 billion in August 2008. But the program is still small in scale. Approved investment funds accumulated stood at \$19.72 billion as of December 2010, just 0.5 percent of China's A-share market capitalization. By keeping fund quotas low, the authorities have limited the ability of foreign financial institutions to play a significant role in the domestic markets and hindered capital market development.

China's Qualified Domestic Institutional Investor (QDII) program, introduced in 2006, allows domestic financial institutions to invest abroad using a structure similar to that of QFIIs. While the authorities initially limited QDII investments to fixed-income instruments, they added equities to the permitted mix in 2007, allowing the QDII program to expand rapidly in size and scope. Early quota demand was driven by the desire of domestic investors to diversify away from domestic markets and take advantage of expected high returns abroad. Most QDII investments are concentrated in instruments traded on the Hong Kong exchange but agreements between Chinese financial supervisory authorities and counterparts in other countries suggest that the authorities may allow investments in other markets in the future.

Retail investor interest in QDII funds declined dramatically in response to the global economic crisis after nearly two years of steady quota expansion. In the 17 months to end-September 2009, the number of QDII licensed institutions and total approved investment funds accumulated remained fixed at 56 and \$50.7 billion, respectively.²³ Demand for quotas was so weak during this period that, by end-August 2009, domestic investors had invested only half their total approved funds abroad, prompting SAFE to warn that it would reduce quotas for QDII investors that did not make full use of them.²⁴ However, once global markets recovered and fears of capital outflows subsided, SAFE quickly resumed its quota approvals. Improved foreign market expectations and growing concerns over domestic overheating and Shanghai A-share market volatility have led to renewed interest in QDII quotas. By December 2010, the number of QDII licensed institutions had increased to 88 and total approved investment funds grew to \$68.4 billion.

Nevertheless, the relatively small size of the QDII program means that it cannot provide households with a significant means to diversify their savings and enjoy portfolio income in excess of what they earn

from low-yielding bank deposits. The total approved QDII investment quota as a share of total Chinese household savings deposits has yet to rise above its 2007 peak of 2.1 percent. This share was only 1.5 percent at the end of the first half of 2010. Furthermore, as discussed earlier, QDIIs do not always exhaust their approved investment quotas.

Other channels for outbound capital flows include cross-border lending by China's banks and sovereign wealth fund investments. Policy banks do the bulk of China's external lending, often to secure commodities abroad or to support the outward investments of state-owned enterprises. However, these banks have engaged in a wider variety of international lending recently, including concessionary multi-billion dollar loan agreements with developing countries for local energy and infrastructure projects. China Investment Corporation (CIC) has continued to increase its outward investment despite the losses it incurred as a result of the financial crisis. According to one estimate, it invested \$58 billion abroad in 2009, increasing its total overseas holdings to about \$100 billion.²⁵

Finally China's effort to promote the internationalization of the renminbi could ultimately facilitate the transition to capital account convertibility. China launched this initiative in 2004 when it allowed Hong Kong residents to open renminbi deposit accounts in Hong Kong banks. The effort to internationalize the use of the renminbi was further boosted in July 2009 when China introduced cross-border trade settlement in renminbi. Initially this program ran as a pilot. It was restricted to trade between five Chinese cities and Hong Kong, Macao, and ASEAN countries and was open to all Chinese importers but only a small number of exporting firms. In 2010 the program was widened in two steps. First, in June 2010 the program was expanded to include trade transactions between Chinese firms in 20 provinces and cities and the rest of the world. Second, in December the authorities substantially expanded the number of Chinese exporting companies able to participate in cross-border trade settlement in renminbi.²⁶ As a result, the volume of renminbi trade settlement expanded from RMB3.6 billion (US\$0.5 billion) in the second half of 2009 to RMB66.7 billion (US\$9.8 billion) in the first half of 2010 and then RMB126.5 billion (US\$18.7 billion) in the third quarter. However, even in the third quarter only about 2 percent of China's international trade transactions were settled in renminbi. The vast majority of transactions are still settled in US dollars.

Because the cross-border renminbi trade settlement continues to be predominantly settlement of Chinese import transactions, the program has led to a substantial build up of renminbi deposits in Hong Kong. By July 2010 renminbi deposits in Hong Kong banks totaled RMB103.7 billion or 1.8 percent of total bank deposits (Subacchi 2010, 9). Deposits continued to build rapidly and by end-October stood at RMB217 billion or twice the mid-year amount.

This build up has been possible only because of reforms in the ways that renminbi deposits can be utilized. Initially Hong Kong banks accepting renminbi deposits had little alternative to deposit the funds with the Bank of China (Hong Kong), which serves as the clearing bank. But Bank of China pays

only 0.865 percent interest on these renminbi deposits. Thus Hong Kong banks were not able to offer attractive interest rates to individuals and firms depositing renminbi funds. To make the holding of renminbi deposits more attractive the Chinese authorities have taken several important steps.

First, since 2007 the mainland authorities have gradually approved an expanded issuance of renminbi-denominated bonds in Hong Kong. Initially issuance was limited to the Ministry of Finance and domestic Chinese financial institutions. But in 2010 foreign companies were authorized to issue renminbi-denominated bonds in Hong Kong. Increasing the availability of higher yielding renminbi-denominated financial assets is critical to increasing the international use of the renminbi.

Second since August the mainland authorities have granted Hong Kong banks involved in renminbi cross-border trade settlement access to the on-shore interbank bond market. Thus, these banks can now invest their renminbi funds in bonds issued in China and traded on the interbank bond market. This allows these banks to purchase higher-yielding renminbi denominated financial assets rather than holding low-yielding deposits with the clearing bank. This, in turn, allows them to offer higher rates on renminbi deposits, making Hong Kong exporters more willing to settle their transactions with their mainland Chinese clients in renminbi.

In the short run it is not clear whether China gains in pure economic terms from this increased internationalization of the renminbi. As already noted renminbi settlement has been dominated by Chinese importers, rather than exporters. This means increased off-shore holdings of renminbi, which at the margin increases rather than decreases the pressure for renminbi appreciation in the onshore foreign exchange market. It is sometimes argued denominating and settling trade contracts in renminbi allows Chinese firms to escape foreign exchange risk without assuming any hedging costs. This seems unlikely because in a competitive market if foreign firms were required to assume these costs that they would adjust their prices appropriately rather than accepting reduced profits.

The more uncertain question is whether internationalization will ultimately help pave the way for capital account convertibility. Since historically substantial capital account convertibility has preceded the international use of currencies, we are to some extent in uncharted territory. To date the source of all off-shore renminbi deposits in Hong Kong derives from current account transactions, for example renminbi earnings from exporting to China or Chinese tourism. Whether or not foreign investors will be happy to hold increasingly significant amounts of renminbi deposits offshore while China's capital account remains largely closed will determine the success of the internationalization strategy, as currently pursued by the Chinese authorities.

POLICY RECOMMENDATIONS

China has made some progress in relaxing capital controls over the past three decades. The authorities aggressively liberalized inbound foreign direct investment from the outset of the reform process and

have substantially liberalized outbound foreign direct investment over the past decade. Nonetheless most empirical studies measuring the degree to which China's capital account has been liberalized find that China's controls remain highly restrictive even in comparison with other emerging markets such as Brazil and Russia (Chinn and Ito 2008; Ito and Chinn 2010). Moreover, substantial obstacles still impede significant further capital account liberalization, particularly the liberalization of cross-border flows of portfolio capital.

China faces significant challenges in moving toward a substantially more liberalized capital account. First is the state of the domestic banking system. The banking system has been strengthened substantially over the past decade, but its strong recent financial performance may owe as much to the central bank's interest rate controls as to the improved ability of banks to price risk appropriately. As Xiao Gang has acknowledged, "Growing big is the best way for Chinese banks to make more money under the current financial environment. This model of growth, however, neither assures the long-term sustainable development of the banking sector nor satisfies the need of a balanced economic and social structure." Gradual relaxation of remaining interest rate controls, particularly the ceilings on rates for deposits of various maturities, is an essential precondition to the emergence of a robust, fully commercially-oriented banking system. This goal was embraced by China's premier in early 2009 and reiterated by the Central Committee in its Twelfth Five-Year Program approved in October 2010. Hopefully progress will soon be visible on this front.

Second, parts of China's financial system are woefully underdeveloped. While the authorities have made substantial progress in the development of the foreign exchange forward and swap transactions markets, China's local market for non-financial corporate debt remains tiny, only 3 percent of GDP.

Third, China's exchange rate remains significantly undervalued. Consequently, substantially liberalizing the capital account before the value of the renminbi is closer to an underlying equilibrium level would likely generate large-scale speculative capital inflows based on the expectation of a large renminbi appreciation. These inflows could undermine the ability of the central bank to maintain price stability. Thus allowing gradual appreciation of the currency and greater exchange rate flexibility is also an essential precondition to moving toward further liberalization of the capital account.

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3. Hu Shuli and Sun Huixia, "Central Bank Unwavering on Yuan Reform," July 31, 2010, available at <http://caing.com> (accessed December 10, 2010).
4. Conversions of RMB figures into US dollars are calculated using SAFE's average annual spot exchange rate for the relevant year.
5. The ratio of deposits to GDP in China in 2005 was 155 percent. That was substantially higher than any other relevant country. For countries in emerging Asia the ratio averaged 60 percent, in Latin America 25 percent, and in Eastern Europe 45 percent (Cappiello and Ferrucci 2008, 22). China appears to have become even more of an outlier by 2009.
6. In 2009 the return on average total assets at HSBC and Standard Chartered was 0.3 percent and 0.8 percent, respectively; return on equity was 5.1 and 14.3 percent, respectively. HSBC, *Annual Report and Accounts 2009*, March 1, 2010, available at <http://www.hsbc.com> (accessed November 8, 2010). Standard Chartered, *Annual Report 2009*, March 26, 2010, available at www.standardchartered.com (accessed November 8, 2010).
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9. Feng Zhe, "Bank of China Raises 100 Bln Yuan in 2010," December 14, available at <http://english.caing.com> (accessed December 14, 2010).
10. The lower bound on lending rates remained at 0.9 times the benchmark rate, a limit that had been in effect for many years.
11. Wen Jiabao, "Report on the Work of the Government," delivered at the second session of the Eleventh National People's Congress, March 5, 2009.
12. Net interest margin is net interest income divided by the average balance of total interest-earning assets. Xiao Gang, "Don't blame it on the government," August 26, 2010, available at <http://www.boc.cn> (accessed August 27, 2010).
13. The central bank adjusted interest rates effective October 20, 2010. The People's Bank of China left the benchmark rate on demand deposits unchanged at 0.36%, raised the one-year deposit rate by 0.25%, and raised the rates on longer term deposits by somewhat larger amounts. The five-year deposit rate, for example, was raised 0.6%.
14. These bonds are frequently referred to as central bank bills.
15. Data in this paragraph on non-financial corporate bonds outstanding is exclusive of short-term commercial paper.
16. From 2004 through the first half of 2010 China's cumulative current account surplus was 3.0 times the cumulative capital and financial account surplus (State Administration of Foreign Exchange International Balance of Payments Analysis Small Group 2010, 13).
17. "Public Announcement of the People's Bank of China on Reforming the RMB Exchange Rate Regime," July 21, 2005, available at www.pbc.gov.cn (accessed July 21, 2005).
18. "Continuous drop of FDI leads to promulgation of new FDI policies," *China Economic News*, No. 25. July 6, 2009.
19. The "foreign capital restraining order" refers to the system in which several government departments actively manage the foreign debts and foreign exchange registration and settlement of foreign investors investing in China's real estate sector.

20. "China to encourage overseas investment with easier procedures," Xinhua, May 19, 2009, available at <http://english.people.com.cn> (accessed on May 19, 2009)
21. China's stock of outward investment in 2009 was \$229.6 billion, less than a quarter of the size of the \$997.4 billion China received from inbound foreign investment, according to a SAFE statement on China's International Investment Position, released May 5, 2010, available at www.chinadaily.com/business/2010-05/04/content_9808404.htm (accessed November 4, 2010).
22. Between 2000 and 2006 China accounted an average of about 0.8 percent of global OFDI flows--more than India and Brazil, which had 0.4 and 0.7 percent, respectively, but less than Russia which accounted for 1.1 percent despite its much smaller economy. World Bank, "Robust Recovery, Rising Risks," East Asia and Pacific Economic Update 2010, Volume 2, October 2010, p. 26.
23. Many suffered sharp losses during this period, including one fund that had to be liquidated in April 2008 after losing half its principle.
24. Jamil Anderlini, "QDII scheme back after 17-month break," *Financial Times*, November 2, 2009.
25. World Bank. "Robust Recovery, Rising Risks," East Asia and Pacific Economic Update 2010, Volume 2, October 2010, p. 26.
26. Initially only 365 Chinese firms (referred to as mainland designated enterprises) were authorized to settle their export transactions in RMB. In December this number increased to 67, 359.