



China's Challenge to the International Monetary
System: Incremental Steps and Long-Term Prospects
for Internationalization of the Renminbi

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Executive Summary

At the first formal Brazil, Russia, India, and China summit on June 16 in Yekaterinburg, Russia, reform of the international financial and monetary system topped the agenda of the heads of the world's key emerging economies. Over the past several months, leaders from Russia, China, Brazil, and other countries have expressed concern regarding the value and stability of the dollar, and the world's dependence on the U.S. currency. Russia, as the summit host and "ideological provocateur" of the group, has issued the most aggressive statements challenging the dollar and demanding an increased international role for its ruble. However, the cautious policy pronouncements from China, with its far greater economic weight and financial strength, warrant greater attention. Amidst the international rhetoric, Chinese policymakers have undertaken several small but significant steps to begin the internationalization of the renminbi, limit China's reliance on the dollar, and impart their preferences on the international monetary system.

On March 23, 2009, People's Bank of China Governor Zhou Xiaochuan, issued a far-reaching proposal for diversification away from the U.S. dollar in international trade and foreign reserves toward a supra-national currency based on the International Monetary Fund's Special Drawing Rights (SDR). Concurrently, the Chinese government has announced a series of progressive steps to increase the renminbi's international role: "settlement trials" allowing small numbers of export firms in the Yangtze and Pearl River Deltas to settle their trade in renminbi for the first time, currency swap arrangements totaling \$95 billion with six countries, plans to buy SDR-denominated bonds, an agreement with Brazil to encourage trade settlement in their own currencies, the launching of a "net settlement system" to increase liquidity and trading volume in the domestic interbank currency market, and regulatory approval for foreign banks to sell renminbi-denominated bonds in Hong Kong. Though cautious, these measures indicate Beijing's interest in reducing China's vulnerability to fluctuations in the dollar and in gradually raising the status of the renminbi in international trade and finance.

Commentators tend to focus on the prospects for the renminbi challenging the dollar for the prestigious role as the world's principal reserve currency, arguably the toughest bar for an "international" currency to meet, and dismiss speculation on the future of the renminbi as "premature" – as the currency is not yet convertible. However, the internationalization of a currency involves many incremental steps, and includes multiple different roles such as 1) a settlement currency, 2) a vehicle currency for third-party trade or foreign exchange transactions, 3) a unit of account (most significantly for commodity pricing), and 4) a reserve currency. With China having begun this gradual process, it is timely to start considering the prospects of an "international" renminbi.

This paper analyzes the limited information on China's international monetary policy trials and proposals, and relies on both the theoretical literature and the historical case studies of the yen's internationalization in the 1980s and 1990s, the creation of the euro in the past decade, and the early to mid-20th century transition from the pound to the dollar as the world's predominant currency, to review the path and long-term prospects of an "international" renminbi. The yen's experience provides the clearest lessons for China, with the underdeveloped Japanese money market, particularly in bankers' acceptances, and the

composition of Japan's trade limiting the yen's use as a settlement currency, and the limited supply and liquidity of Japanese short-term government securities curbing the yen's attraction as a reserve currency.

Macroeconomic variables point to a steadily expanding role for the renminbi as China gradually loosens its capital controls. China will likely be able to invoice an increasing amount of its bilateral trade in its own currency, even in the absence of full capital account liberalization. The ability of the renminbi to achieve even the limited international status of the yen, however, will depend on the continued development of the financial infrastructure and "software" that drives international currency use. Increased availability, reliability, and ease of use of short-term financial instruments, both government securities and private money markets and bankers' acceptances, will play a critical role in determining the use of the renminbi as a settlement and vehicle currency in international trade. China is also positioned, through its massive demand, for its currency to play an increasing role in the pricing and invoicing of commodities. However, some of the many uncertainties facing the Chinese political system and economy over the coming decades must be addressed before renminbi-denominated assets could approach the "safety" of dollar or euro reserve assets. To trust in a reserve currency, countries must have complete confidence that they will be able to rapidly move significant quantities of money into and out of the reserve country's markets in times of need.

Such international confidence will require the development of deep and highly liquid markets for short-term Chinese government securities, a condition that leads to a fundamental but often overlooked point: in a fiat currency world (unlike under the gold standard), the principal reserve asset is a reserve nation's debt. Therefore, a dominant reserve currency nation must be a net debtor, running a current account deficit, and other countries must run current account surpluses so that they can invest in these debt securities. Such a reality would require dramatic changes to China's growth model and trade policy that have produced China's huge current account surpluses, and with the U.S. current account and fiscal deficits, which are at the heart of global macroeconomic imbalances. If China's leaders are serious about increasing the renminbi's role as a reserve currency, this goal – rather than undermining U.S. economic interests, as some observers fear – might actually reinforce the Chinese government's impetus to follow through on the domestic economic and financial reforms that U.S. economists and policymakers believe are essential for sustainable U.S. and global economic growth in the future.

China's Challenge to the International Monetary System: Incremental Steps and Long-Term Prospects for Internationalization of the Renminbi

China's rapid ascent to a central role in the international economy has been well-documented, and it looks to surpass Germany as the world's largest exporter in 2009. China has also accumulated by far the world's largest foreign reserves and has begun to increase outward foreign direct investment (FDI), development aid, and infrastructure loans. One area in which China has yet to exert much influence, however, is in the role of its currency, the renminbi (RMB), as an international currency for trade settlement or foreign reserves. There is a simple and obvious reason for this – China's lack of capital account convertibility – and any speculation over a renminbi challenge to the role of the dollar is dismissed as “premature” and “at least a few decades away.”

However, the past several months have seen growing concern by Chinese policymakers regarding their reliance on the U.S. dollar and the most significant developments regarding the internationalization of the renminbi since the unification of China's exchange rates in 1994. These developments were punctuated by the March 23, 2009 call by People's Bank of China (PBoC) Gov., Zhou Xiaochuan, a cautious and respected central banker, for the creation of a new supra-national reserve currency. Zhou's proposal touched off a media firestorm over “China's challenge to the dollar,” and was successively misunderstood, exaggerated, and prematurely dismissed. Zhou knows well that the displacement of the U.S. dollar as the world's reserve and vehicle currency is highly unlikely for many years. Zhou's proposal, recent “yuan settlement trials,” and currency swaps nonetheless indicate an interest by the Chinese government in reducing its vulnerability to fluctuations in the dollar and gradually raising the status of the yuan in international trade and finance.¹ Commentators tend to focus on the prospects for the yuan challenging the dollar for the prestigious role of serving as the world's principal reserve currency, arguably the toughest and most complicated bar for an “international” currency to meet. The transition from one “principal” reserve currency to another takes several decades and is among the rarest, and potentially least understood, phenomena in international relations.

However, the internationalization of a currency involves many incremental steps, and includes multiple different roles – such as 1) serving as a settlement currency, 2) a vehicle currency for third-party trade or foreign exchange transactions, 3) a unit of account (most significantly for commodity pricing), and 4) as a reserve currency. Some initial indications from the Chinese government are emerging right now, making this an appropriate time to start seriously considering the potential internationalization of the

¹ This paper will use the terms *renminbi* (人民币) and *yuan* (元) interchangeably. Renminbi, or “the people's currency,” is the formal name of China's currency, while yuan is the primary unit of account (yuan is to renminbi as pound is to sterling). However, just as common usage has blurred the formal distinction between the pound and sterling, Chinese and international commentators alternately use yuan and renminbi to refer to the currency.

yuan. This paper analyzes in detail the limited information on China's international monetary policy trials and proposals, and then relies on both the theoretical literature and the historical case studies of the yen's internationalization in the 1980s and 1990s, the creation of the euro in the past decade, and the early to mid-20th century transition from the pound to the dollar as the world's predominant currency, to review the path and long-term prospects of an "international" renminbi.

Recent Developments in China's Renminbi

The April 8, 2009 announcement by China's State Council that it would allow exporters in selected mainland cities to settle overseas trade in yuan should be seen as the first tentative step toward the convertibility and internationalization of the renminbi. One trial will be for trade between the Yangtze River Delta and Pearl River Delta regions, China's primary export regions, and the Special Administrative Regions of Hong Kong and Macau. A second yuan settlement trial has been proposed for exporters in the Guangxi Autonomous Region and Yunnan province in southwest China to use the Chinese currency to settle trade with counterparts in the 10 countries of the Association of Southeast Asian Nations (ASEAN). These trials will apply to a limited number of companies at first. For example, Guangdong provincial Gov. Huang Huahua stated that 300 companies in Guangzhou, Shenzhen, Zhuhai and Dongguan would be eligible for the program.² These "test programs" are also likely to have limited immediate impact, as the lack of convertibility and lack a market for currency conversion and hedges will limit the willingness of foreign firms to rely on the yuan. The markets are still awaiting detailed regulations to be published by the Chinese government, but foreign firms will likely have to exchange their own currency into U.S. dollars first before paying yuan, adding cost and inconvenience. These trials are likely to be expanded if successful, however, and over time should increase international confidence in the yuan.

Since December 2008, China has also signed six currency swap agreements worth a total of 650 billion yuan (\$95 billion) with Indonesia, South Korea, Hong Kong, Malaysia, Belarus, and Argentina. The practical significance of these agreements remains unclear, and they appear to be more oriented at trade finance and political goodwill than augmenting reserves to maintain currency stability. As the yuan is not convertible, Argentina, for example, could not sell yuan to defend its currency, a typical use for foreign reserves. Countries with yuan currency swaps can only use these to pay for imports of Chinese goods – a potentially useful option while dollar liquidity remains a problem for many countries during the current global financial crisis. As such, China's recent currency swaps should be seen more as provisional trade finance to further the yuan's role in trade settlement than incremental moves toward reserve currency status. Toward this end, China and Brazil announced more direct plans on May 18, 2009 to settle China's imports from Brazil in renminbi, while Brazil's imports from China would be paid for in real, bypassing the use of the U.S. dollar. This announcement came after China eclipsed the U.S. in April as Brazil's largest trading partner. However, the plans face significant obstacles and were met with initial skepticism. Trade between the two countries with non-convertible currencies will require involvement by the central banks

² Chung, Olivia, "Yuan Trade Move 'Far Reaching,'" *Asia Times*, April 21, 2009.

in any transaction, a hassle that has kept local currency settlement between Argentina and Brazil, under a similar plan, at miniscule level.³ Nonetheless, Malaysian Prime Minister Najib Abdul Razak announced June 3 that Malaysia may join Brazil in seeking to settle its Chinese trade in renminbi, with Russia following two weeks later, indicating a wider political, if not economic, interest in the arrangement.

On June 1, China launched a new multilateral net settlement system, run by the China Foreign Exchange Trading System (CFETS), the central bank's foreign-exchange and money-market trading platform, which would conduct net settlement services for 21 Chinese and foreign market makers for yuan trading with the dollar, euro, yen, pound, and Hong Kong dollar. China's interbank currency market, in contrast to international currency markets, suffered a liquidity crunch during the current global financial crisis, with some banks cutting credit lines with their foreign counterparts. Addressing this collapse of trust by essentially eliminating counterparty risk, CFETS' move should increase liquidity and trading volume in the domestic currency interbank yuan currency market and is an important, but nascent, step toward building China's "onshore" foreign exchange trading infrastructure. In terms of the "offshore" yuan market, on May 19, HSBC and Bank of East Asia became the first foreign banks to gain approval to sell yuan bonds in Hong Kong. This issuance will support the "yuan settlement trials" discussed above, by increasing yuan liquidity in Hong Kong. The mainland-based Bank of China (BoC) has already been selling yuan-denominated bonds in Hong Kong since 2007, and Hong Kong banks have been able to accept yuan deposits since 2004. Further regulatory and market developments, such as allowing Chinese corporations to open RMB accounts in Hong Kong, are likely in the coming months.

Special Drawing Rights

After the tentative steps toward settlement trials and currency swaps, the most significant rhetoric from the Chinese government has been PBoC President Zhou's call for dramatically expanded use of IMF Special Drawing Rights (SDRs). Over the past few months several Chinese economic officials have expressed concern regarding the stability and value of the Chinese government's massive dollar holdings, which are believed to account for roughly two-thirds of its unprecedented \$1.95 trillion in foreign reserves. China's premier, Wen Jiabao stated in March, "To be honest, I am a little bit worried. I request the U.S. to maintain its good credit, to honor its promises and to guarantee the safety of China's assets."⁴ On March 23, Zhou Xiaochuan added intellectual creativity to these concerns by publishing a far-reaching proposal for a new international monetary system based on Special Drawing Rights replacing the volatile dollar as a "super-reserve currency." Zhou is a savvy political figure as well as economist, and this theoretical proposal may have been intended as a shot across the bow

³ In response to the announcement, Rubens Ricupero, former secretary general of the United Nations Conference on Trade and Development stated "The exporter wants to be paid in a currency with which he can do whatever he wants. If he is paid in local currency, he can only use it in that country to buy the goods and services in that country. It's a completely archaic vision of international trade." *Reuters*, "China Trade in Local Currency a Long Shot," May 26, 2009.

⁴ Lee, Don and Barbara Demick. "China's Wen Jiabao Concerned About Safety of Investments in U.S." *Los Angeles Times*, March 14, 2009.

to the Obama Administration, as well as an effort to deflect attention from the discussions on “global imbalances,” perceived by Chinese officials as unfairly aimed at China. However, Zhou’s proposal should not be dismissed as an exercise in political rhetoric or abstract theorizing. His paper includes specific steps to reduce China’s reliance on the dollar and implicit references to an increased role for China’s renminbi (i.e., “the basket of currencies forming the basis for SDR valuation should be expanded to include currencies of all major economies, and gross domestic product may also be included as a weighting”).⁵ It is worth examining more closely for insights into the Chinese leadership’s thinking on the international monetary system and the international role of the yuan.

Special Drawing Rights were created by the International Monetary Fund in 1969, in the last years of the gold convertibility standard, to support global liquidity against a shortage of both gold and dollars. The demise of the Bretton Woods system in 1971 obviated the SDR and it has since served a limited role as a reserve asset and the IMF’s unit of account. SDRs are not, strictly speaking, currency, but represent potential claims on other countries’ freely usable foreign reserves. The SDR is defined against a basket of currencies currently comprised of the U.S. dollar (41 percent), euro (37 percent), Japanese Yen (12 percent), and Pound Sterling (10 percent). The basket composition is reviewed every five years to ensure that it reflects the relative importance of currencies in the world’s trading and financial systems. The next review by the IMF Executive Board will take place in late 2010, and Zhou has laid down a marker that China is interested in seeing the yuan included in this review.

Is this a plausible idea? The last review, completed in 2005, stipulated that “the currencies included in the SDR shall be the four currencies issued by Fund members... whose exports of goods and services during the five-year period ending 12 months before the effective date of the revision had the largest value and which have been determined by the Fund to be freely usable currencies in accordance with Article XXX (f).”⁶ Once chosen, the weighting of the currencies inside the SDR basket is determined by the value of exports and the “amount of reserves denominated in the respective currencies which are held by other members of the IMF.” There is no statutory or economic rationale for the limitation to four currencies – from 1981 to 2000 the SDR basket included five currencies, before the French Franc and Deutsche Mark were consolidated into the Euro – so there is ample precedent and flexibility to include the yuan if deemed appropriate.⁷ On the second measure, exports of goods and services, China recently passed the U.S. as the second largest exporter in the world behind Germany and clearly meets the SDR criteria. However, the yuan stumbles on the third and fourth criteria, in being a “freely usable” currency and in serving as a reserve currency. With tight capital controls, the yuan is clearly not “freely usable” and currently plays a negligible role in other countries’ foreign reserves.

⁵ Zhou, Xiaochuan (2009), “Reform the International Monetary System,” 1.

⁶ IMF (2005), “IMF Completes Review of SDR Allocation.”

⁷ Russian leaders have also indicated that they would like the ruble included the SDR, but the currency’s precipitous fall in the past several months would appear to make it a poor candidate.

To Nobel Prize laureate Robert Mundell, one of the architects of the euro, these shortcomings are outweighed by China's role in international trade. He stated recently, "The Chinese yuan is now the third most important currency in the world... arguably more important than the yen, depending on how you measure it. I believe that in 2010, the yuan should be added to the SDR."⁸ On the one hand, China's recent moves to establish swap lines with several countries do suggest some capacity for use of the Chinese currency to augment global liquidity. However, as the SDR's primary use is to serve as a potential claim on "freely usable" reserve assets of member countries, it is unclear if the inclusion of a non-convertible currency would be appropriate or constructive. Moreover, China remains the only major country that fails to report the composition of its own foreign reserves to the IMF, a situation that does not instill confidence in the yuan's inclusion in a system that relies significantly on transparency.⁹

What would be the practical importance of including the yuan in the SDR? Since its inception, the SDR has been dismissed by skeptics as "paper gold" and "an accounting gimmick," and has failed to play a meaningful international role. Zhou's proposal was well-timed, however, preceding the most significant expansion of the SDR since its creation. The announced issuance of \$250 billion in SDR at the G20 London Summit in April, an idea apparently driven by the U.S. Treasury, will immediately augment countries' foreign reserves, hopefully cushioning some of the liquidity crunch of the IMF's smallest members.¹⁰ The increased issuance of SDR, as it functions currently, is unlikely to have a significant impact on the international monetary system. In his paper, however, Zhou included tangible proposals to increase the "real" backing and functional use of the SDR, one of which is already being put into effect. First, he encouraged the introduction of SDR-denominated securities, an issue the IMF was already considering, but one that would have seemed quite unlikely only six months ago. Though plans are still being finalized as of June 2009, an SDR-denominated bond issuance was one of the key topics at the IMF's April 25-26 spring meetings, after Chinese officials met with counterparts from Brazil, Russia and India to discuss the terms they would want in order to take part in such an offering. On May 10, Vice Governor of the People's Bank of China, and head of China's State Administration of Foreign Exchange Hu Xiaolian made clear that "our contributions to [the] IMF's fund-raising will come in the form of an SDR bond," with an expected \$50 billion investment, while Russia and Brazil have each pledged to invest \$10 billion in SDR bonds. Another proposal made by Zhou in his paper that, at least at this point, appears more fanciful is the expanded use of the SDR as a settlement currency in international trade and financial transactions, including commodities pricing – a topic this paper will turn to below.

Zhou concludes by calling for the allocation of the SDR to be "backed by real assets, such as a reserve pool, to further boost market confidence in its value." This last proposal looks to revive the IMF "substitution account" concept of the late 1970s, which would allow countries with large dollar reserves to convert part of their holdings into

⁸ "Yuan should be added to SDR basket next yr. –Mundell" *Reuters*, April 9, 2009.

⁹ <http://www.imf.org/external/np/sta/ir/colist.htm>

¹⁰ This issuance, allocated to all countries in relation to their IMF quotas, will nominally increase China's reserves by \$9.3 billion, pushing its total reserves to over \$2 trillion

SDRs.¹¹ The attraction of such a system to China – offering a risk-free way out of its self-induced “dollar trap” by reducing its exposure to the dollar without depressing the value of its remaining dollar holdings – is clear. Such a pooling of reserves under the IMF would appear unlikely at the present time, but it is another idea that should be watched.

Zhou admits that “the reestablishment of a new and widely accepted reserve currency with a stable valuation benchmark make take a long time.”¹² It is unclear whether it will be feasible to put these measures into practice, but if implemented, they would serve China’s goals of reducing its reliance on the dollar and gradually increasing the role of the yuan. Taken as a whole, Zhou Xiaochuan’s proposal to “Reform the International Monetary System” indicates China’s dissatisfaction with the current dollar-based international monetary system, and includes some practical short- to medium-term implications for the yuan and the international monetary system that merit attention, but it is unlikely to serve as a blueprint for significant overhaul of the international monetary system.

Internationalization of a Currency – Theoretical Framework

To look beyond Zhou’s SDR proposal and China’s tentative steps towards international settlement and currency swaps to the longer-term prospects for internationalization of the renminbi, we must rely on the theoretical literature and historical case studies. For a currency to become widely used as an international currency, it is expected to meet two broad conditions: first, market participants must have confidence that its value will remain stable, requiring both low inflation and an expectation of domestic political stability, and second, it should be supported by deep and broad financial markets, with liquid secondary markets, and few capital or exchange controls. In particular, it should have liquid short-term markets that allow foreigners to move funds in or out quickly and easily. Key criteria on which to judge the “internationalization” of a currency include: the fraction of trade invoiced in the currency (“settlement”), including third-party trade using the currency as a “vehicle currency,” the amount of international financing (loans and bonds) denominated in the currency, turnover of foreign exchange trading conducted in the currency, and the extent to which the currency is used as an international “reserve currency” by foreign central banks.

Settlement or “Invoice” Currency

The internationalization of the yuan is likely to proceed earliest in the settlement or invoice function, an area in which the first tentative steps have been taken, as outlined above. China’s economic influence still derives primarily from its role in the international trading system, rather than its financial might. In addition, the requirements for a settlement currency are far less than those of a reserve currency. When selling to a foreign market, an exporting firm can invoice transactions in its own currency, in the

¹¹ Bottelier, Pieter (2009), “International Monetary Reform and the Future of the Renminbi,” *Jamestown Foundation China Brief*, Volume: 9 Issue: 11.

¹² Zhou, p. 2.

currency of the destination country, or in a third “vehicle” currency. Currently, most of China’s trade is denominated in dollars, bilaterally and as a “vehicle” currency with other trading partners. Switching to the yuan over time would help Chinese companies reduce exchange-rate risk and save on transaction costs. China is increasingly at the center of trade flows in East Asia, seemingly a clear rationale for an expanded use of the yuan in this intra-regional trade in particular. In key respects, China finds itself in a place similar to that of Japan as it was opening up its capital account in the 1980s and 1990s, and Japan’s experience over the past few decades provides some useful indications of what we might expect from China’s yuan in trade invoicing.

Despite predictions for a “Yen Bloc” and “Japan’s New Financial Empire” in the 1980s, the yen never grew to challenge the dominant role of the dollar in East Asian trade. Japan adopted the IMF’s Article VIII to open up its current account in 1964, and began its gradual capital account liberalization process in 1967. Well into the 1970s, however, the Japanese government closely regulated the domestic money and capital markets, as well as tightly controlling international capital transactions in order to maintain a stable exchange rate. In the mid-1970s, Japan undertook domestic financial liberalization in earnest and lifted all capital controls, in principle, by 1980. The May 1984 Yen/Dollar accord specified substantial additional measures to liberalize the capital account “in practice,” many of which were adopted with an eye toward promoting the internationalization of the yen. These reforms did encourage the use of the yen as an invoice currency, as the percentage of Japan’s exports invoiced in yen rose from 1 percent in 1970, to 17 percent in 1975, 29 percent in 1980 and 39 percent by 1985. However, this trend plateaued at about 40 percent, with the yen failing to top 50 percent even in its trade with Southeast Asia, meaning that “the yen lags far behind other major currencies in the role of the trade invoice currency.”¹³ By comparison, most industrialized European countries before the introduction of the euro had over 50 percent of their trade denominated in their national currencies. In the invoicing of Japan’s imports, the yen has played a smaller role still, plateauing at 20-22 percent from 1993-1998. Beyond the direct use of the yen in Japanese trade, East Asian countries are unlikely to use the yen as a “vehicle” currency in their trade with other countries relying primarily on the dollar. Lastly, foreign exchange trading involving the yen remains quite small relative to the dollar in the key Asian foreign exchange markets, Singapore and Hong Kong.

The limited international use of the yen has been largely attributed to underdeveloped yen money and capital markets. In particular, the underdeveloped market for bankers’ acceptances, essential for trade financing, made it more difficult for banks to refinance yen-denominated trade credit and thus facilitate the use of yen-denominated trade financing. However, additional factors relating to Japan’s trading patterns are also important, and relevant to China. Foremost among these are the relatively large share of exports going to the U.S. and the high import ratio of raw materials and fuels, which are mainly invoiced in the dollar. Economist R.I. McKinnon also hypothesized that

¹³ Sato, Kiyotaka (1998), “The International Use of the Japanese Yen: The Case of Japan’s Trade with East Asia,” The International Centre for the Study of East Asian Development (ICSEAD) Working Paper Series Vol. 98-16, p. 10.

specialized manufactured products tend to be invoiced in the exporter's currency, while undifferentiated primary products tend to be invoiced in a major international currency ("McKinnon's hypothesis"). Manufacturers in advanced economies, which typically produce distinctive products, tend to have greater market power over their products and ability to invoice exports in their national currency in order to stabilize profits in terms of their home currency. Producers of more homogenous primary products, on the other hand, tend to have less market power to determine their invoice currency, and thus are more likely to be subject to global commodity pricing – more often than not in U.S. dollars. China's success in its climb up the value chain and in becoming an innovation-oriented society may thus have implications for the use of the yuan as an invoice currency. However, the sheer scale of China's consumption and production of raw materials and commodity goods, far eclipsing Japan's and increasingly supplanting the U.S. in volume, may provide an altogether different momentum for the role of the yuan in pricing these markets.

Commodities Pricing

Some commentators point to the role of the dollar in pricing oil transactions as the key to its continued international dominance – in particular OPEC's 1975 decision to accept the U.S. dollar as the sole pricing and settlement currency for oil, in the tumultuous years after the collapse of the Bretton Woods system. They argue that this move led to the oil producers accumulating massive dollar holdings and oil importers needing large quantities of dollars to purchase oil, reestablishing the dollar as the backbone of the international economy. This case is likely overstated, but it does emphasize one of the key functions the dollar serves as an international currency – pricing oil and commodities more generally.

A close reading of Zhou Xiaochuan's proposal for "Reform [of] the International Monetary System" indicates a similar Chinese unease with the volatility imposed on global commodities markets by the fluctuating value of the dollar as in the value of China's reserve assets. The volatility of the dollar played a key role in exacerbating the run-up and subsequent precipitous fall in the price of oil and other commodities. China would no doubt like to see an increasing role, directly or indirectly, for its own currency in the international pricing of commodities to help minimize supply disruptions arising from price volatility. Zhou called for the international community to "actively promote the use of the SDR in international trade, commodities pricing, investment and corporate book-keeping. This will help enhance the role of the SDR, and will effectively reduce the fluctuation of prices of assets denominated in national currencies and related risks."¹⁴ Such a role for the SDR would clearly provide a strong rationale for the inclusion of the renminbi, in progressively greater weights, which would help Beijing mitigate currency risk and volatility while avoiding a head-on challenge to the dollar.

China is not alone in its concerns, nor at the forefront of questioning the role of the dollar. Russia has been most aggressive in expressing dissatisfaction at the role of the dollar in energy markets, establishing the St. Petersburg Oil Exchange in March 2008 and

¹⁴ Zhou, p. 3.

seeking to use the ruble as the settlement currency for its oil and gas transactions in order to gain greater influence over oil pricing. Russia has far more explicitly than China expressed its desire for a growing international role for the ruble, a goal it is pursuing primarily through the large volumes of Russian oil and gas in international markets. In order to build momentum amid market skepticism, Russia has sought government-to-government contracts, including an October 2008 proposal by Vladimir Putin to settle bilateral trade between Russia and China in rubles and renminbi, rather than dollars.¹⁵ The Chinese leadership did not respond to this proposal at the time, appearing not to share Russia's goal of directly challenging the U.S., and likely also concerned about the plummeting value of the ruble last fall. However, on July 17, 2009 on the heels of the inaugural BRIC summit, Presidents Hu and Medvedev announced an agreement to expand use of the ruble and yuan in bilateral trade to lessen dependence on the U.S. dollar. "We agreed to take further steps in this direction, including, perhaps, by adjusting contracts and laws that already exist," stated Medvedev.¹⁶ Russian officials announced expected energy exports to China worth \$100 billion over the next 20 years, adding that energy sales in rubles are a "strategic" issue for Russia.

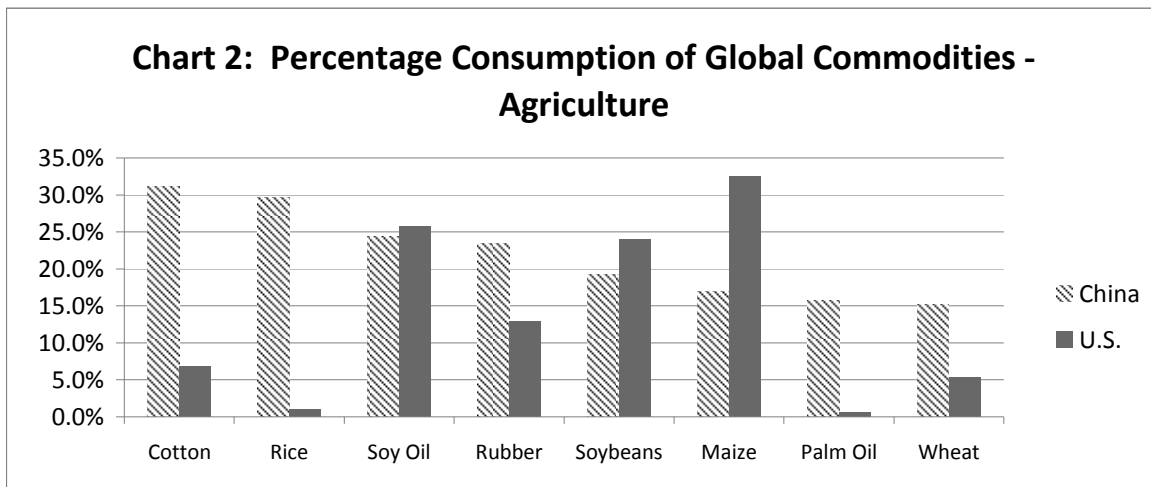
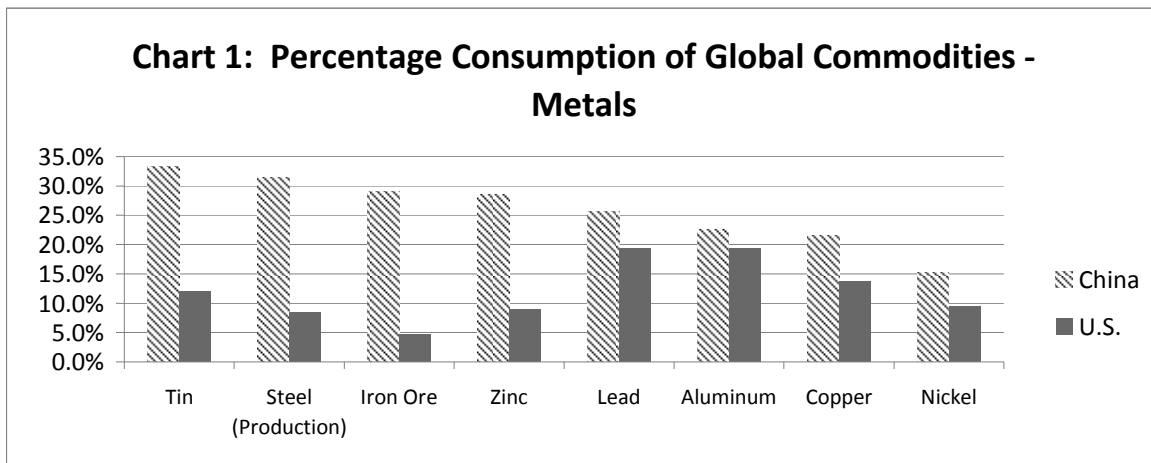
More important than such Russian maneuvering, China's central and growing role in world commodities markets shows the potential for an increasing role of the yuan in pricing commodities. By 2005, China had become the world's leading consumer of most major metals, including aluminum, copper, lead, nickel, tin, zinc, and in the production of steel (Chart 1). China has likewise risen to become the world's largest consumer of most agricultural commodities (Chart 2). These volumes and China's role in world markets are likely to continue to rise as China's growth outstrips that of other major economies, even as China's growth pattern evolves, providing a rationale for increased use of a convertible renminbi one or two decades hence. This rationale could prove particularly compelling for use of the yuan by resource-dependent economies in Africa, for example, with large percentages of their national incomes derived from commodities exports.

In the all-important oil market, however, despite rapid growth rates, China still lags considerably behind the U.S. and its consumption is likely to remain smaller than the U.S. and E.U. even in 20-30 years (Chart 3). China's current and projected "market power" in the more geographically segmented natural gas market is more limited still. While the view that there is only room for one principal reserve currency is overstated, as we will see shortly, it appears to remain true that oil can only practically be priced in a single major currency, unless producers are willing to subject themselves to constant currency arbitrage, leaving significant value on the table. For this reason, dissatisfied regimes such as Iran and Venezuela still quote their oil in dollars, despite their political gamesmanship in seeking to sell the commodity in other currencies. Perhaps more important than sheer volume, moreover, the U.S. and dollar-denominated commodities futures markets are the deepest, most liquid, and most sophisticated in the world, providing significant additional motivation for producers and consumers alike to continue pricing commodities in dollars. To compete in commodities pricing, China will need to

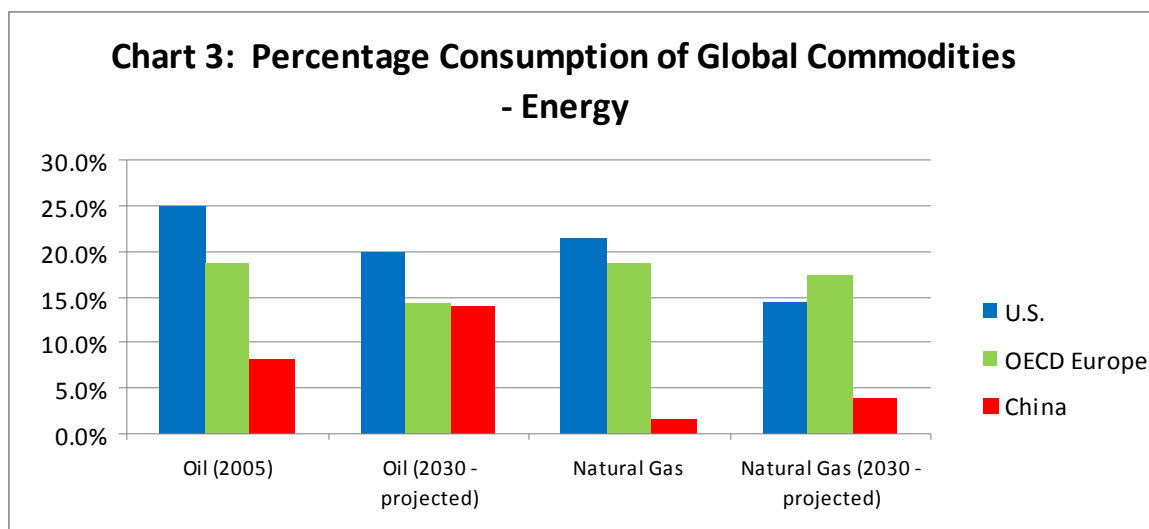
¹⁵ ChinaStakes.com, "Russia and China look to move trade to new level," Oct. 28, 2008.

¹⁶ Pronina, Lyubov and Alex Nicholson. "Russia, China to Promote Yuan Use in Trade." *Bloomberg*. July 17, 2009.

build up a commodities futures trading infrastructure comparable to the New York Mercantile Exchange (NYMEX) and the London-based IntercontinentalExchange (ICE). The Chinese government announced plans in late 2008 to open a Beijing Oil Exchange, the nation's third oil exchange after Shanghai Futures Exchange and Dalian Commodity Exchange, setting out the goal of becoming an influential regional centre of trading, information and pricing for oil products. Overall futures trading volume in China continues to grow rapidly, increasing 60 percent year-on-year from May 2008 to May 2009, according to the China Futures Association, with total volume reaching 38.3 trillion yuan in the first five months of 2009.¹⁷



¹⁷. China Futures Transaction Volume up 60% in May, *China View*, Accessed on June 1, 2009 at http://news.xinhuanet.com/english/2009-05/31/content_11461297.htm The Zhengzhou Commodity Exchange also serves as an important futures market, specializing in agricultural and chemical product futures.



Reserve Currency

Earning a place as a reserve currency is much more difficult than gaining use as a settlement or vehicle currency. What role is likely or possible for the yuan? Each time the U.S. dollar has come under strong pressure, speculation has abounded about the dollar losing its position as the world's reserve currency to an international (i.e., SDR) or national competitor. An initial decline occurred in the late 1970s amidst high inflation and macroeconomic instability in the U.S. The dollar's share in international reserves fell again in the late 1980s due to the solidification of the European Monetary System (EMS), boosting demand for deutsche marks and French francs, and growing strength of the yen. This trend reversed by 1992, however, due to turbulence in the EMS and the onset of Japan's "lost decade." Ironically, the current global financial crisis, though emanating from the U.S. financial system and shining a spotlight on the unsustainability of U.S. fiscal imbalances, has once again reinforced the dollar as the world's reserve currency.

Currency	1972	1976	1980	1984	1990*	1996	1999	2002	2005	2008
Dollars	78.6%	76.6%	67.2%	65.8%	49.1%	62.1%	71.0%	67.1%	66.9%	64.0%
ECUs / Euros					9.6%	7.1%	17.9%	23.8%	24.0%	26.5%
Pounds	7.1%	1.9%	2.9%	2.8%	3.2%	2.7%	2.9%	2.8%	3.6%	4.1%
Yen	0.1%	2.1%	4.3%	5.4%	8.2%	6.7%	6.4%	4.4%	3.6%	3.3%
Deutsche Marks	4.6%	8.8%	14.8%	12.1%	17.5%	14.7%	N/A	N/A	N/A	N/A
French Francs	0.9%	1.6%	1.7%	1.1%	2.2%	1.8%	N/A	N/A	N/A	N/A
Other / Unspecified	7.7%	6.8%	5.9%	10.9%	10.2%	4.9%	1.8%	1.9%	1.9%	2.1%

Sources: BIS (1972-1984), IMF Annual Report (1990), IMF COFER Data (1996-2008)

* Due to different reporting standards and incomplete disclosure of foreign reserves by central banks, figures vary between datasets.

The dollar today represents almost two-thirds of central banks' reserves, fluctuating considerably over the past few decades but nonetheless showing resilience as potential competitors have encountered their own problems. Predictions for the growing role of the yen in international reserves quickly fizzled, with the yen's role declining steadily since its peak in the mid-1990s, despite progressive financial liberalization and dramatic growth in Japan's government securities market. The euro, combining the economic and financial weight of the European Union, has emerged as a credible reserve alternative, reaching a respectable 26.5 percent share of global foreign currency reserves in 2008. By most accounts, the liquidity and sophistication of euro financial markets are also fast approaching those of U.S. dollar markets. However, euro bond markets remain segmented between its 16 member countries, with varying credit worthiness and thus pricing. Perhaps more importantly, the euro's weakness in the current global financial crisis and the inability of leading European governments to coordinate fiscal or financial policies calls its continued ascendance into question. The only modern example of a reserve currency being seriously challenged, and ultimately replaced, is the eclipse of the British pound by the U.S. dollar in the middle decades of the 20th century. Each of these cases provides lessons for the future of the yuan and its potential competition with the dollar and euro for a place in central banks' foreign reserves.

Lessons from the Internationalization of the Yen

Despite the continued liberalization of the Japanese financial sector, dramatic growth of the Japanese government securities market, and increasing percentage of yen-denominated international bank loans, the yen's share of reserves has declined steadily since peaking at 8-9 percent in the early 1990s. On an overall basis, the size of the Japanese government securities market surpassed the U.S. in 2002-2003. International bank loans denominated in yen rose sharply in the 1980s, particularly Asian countries, with the proportion of yen-denominated debt in Korea, Thailand, Malaysia, Indonesia, and the Philippines doubling from 19.5 percent in 1980 to 37.9 percent in 1990.¹⁸ Nonetheless, the yen's role as a reserve currency peaked in the early 1990s at 8-9 percent and has steadily receded since. This decline occurred within the context of Japan's serious economic and financial problems in the 1990s, pointing to the difficulty of maintaining the economic stability and strength required of a reserve currency. However, key structural issues most often cited as obstacles in the yen's adoption as a reserve currency are the inferior liquidity of the yen money market in relation to the U.S. dollar money market, primarily due to a series of transaction taxes as well as the undersupply of government Treasury bills – the type of security usually preferred by central banks as a reserve asset.

Japan's lower volume of short-term Treasury bills is a conscious choice of the Ministry of Finance regarding how to finance its government debt. Of Japan's 2007 debt issuance, a mere 5.5 percent were 6-month bills, 15 percent were 1-yr bills, 64 percent dated from 2 to 10 years, and the remainder longer-dated bonds.¹⁹ By comparison, the

¹⁸ Garber, Peter (1996), "The Use of the Yen as a Reserve Currency," *Monetary and Economic Studies*.

¹⁹ Ministry of Finance, Japan (2008), *Debt Management Report 2008: The Government Debt Management and State of the Public Debt*.

latest “Monthly Statement of the Public Debt of the United States” indicated that 31 percent of outstanding marketable treasury securities were in bills (with maturities of 1, 3, 6, and 12 months), 50 percent were in notes (2, 3, 5, 7 and 10 year-maturities), with the remaining 19 percent in longer-dated Treasury bonds and Treasury Inflation Protected Securities (TIPS).²⁰ The U.S. Treasury bill market operates on same-day cash settlement, providing instant funds for sudden payment requirements. However, as of the early 1990s, yen Treasury bills were settled only six times a month, injecting much more “settlement risk” into the holding of yen. This convention was changed to T+7 and subsequently T+3, but still compares unfavorably with the liquidity of the U.S. market. In addition, low returns on yen Treasury bills dissuade foreign central banks. Lastly, the substantial support infrastructure provided to foreign central banks by the U.S. Federal Reserve, both facilitates these central bank’s operations in the U.S. Treasury and money markets and keeps the Fed closely informed of market movements.

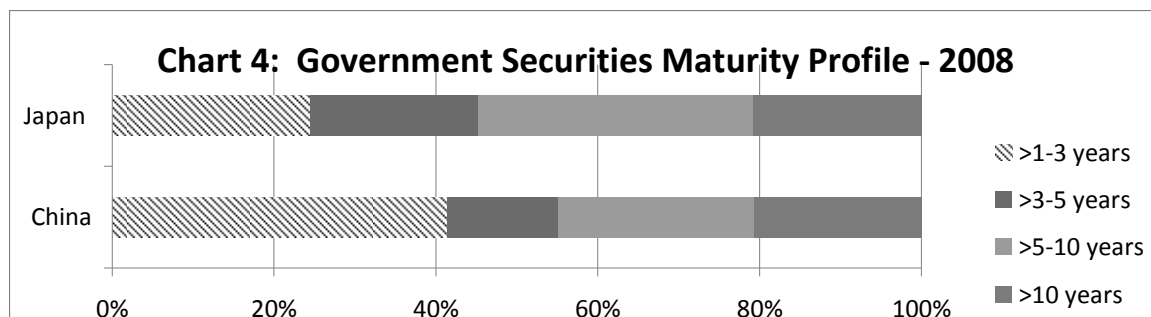
Particularly since the 1997-98 Asian Financial Crisis, Chinese policymakers have internalized the importance of developing the country’s domestic debt market and have rapidly increased the issuance of government securities in particular. China’s local currency government securities market has grown rapidly from a mere \$57 billion in 1997 to \$435 billion in 2003 and \$1.96 trillion in 2008. This level is still small compared to the government securities markets in Japan (over \$9 trillion) and the U.S. (roughly \$8 trillion at the end of 2008).²¹ A cursory review of the maturity profiles, based on Asia Bonds Online data, shows a balanced maturity schedule for Chinese government securities, weighted more heavily toward short- to intermediate-term securities than in Japan (Chart 4). However, as documented by Pieter Bottelier, the Chinese government bond market still suffers from a shortage of short-term bonds / bills, an underdeveloped secondary market, and insufficient legal and institutional frameworks, and has yet to introduce 3-month and 6-month treasury bills.²² A more recent study from Nomura Capital Markets Review reemphasized the shortage of treasury bills and limited liquidity, finding that only 11 percent of outstanding Chinese government bonds had a maturity of a year or less.²³ Significant further development of China’s bond markets over the upcoming decades will be required to support a role for the yuan as a reserve currency.

²⁰ Department of Treasury, United States (2009), “Monthly Statement of the Public Debt of the United States, April 30, 2009.”

²¹ Bank for International Settlements. <http://www.bis.org/statistics/secstats.htm>

²² Bottelier, Pieter (2004), “China’s Emerging Domestic Debt Markets,” Stanford Center for International Development Working Paper No. 202.

²³ Jingu, Takeshi (2008), “China’s Government Bond Market,” *Nomura Capital Markets Review*.



Lessons from the Pound to Dollar Transition

Looking to the more distant horizon, the eclipse of the pound by the U.S. dollar provides the only modern case study of an effective challenge to, and replacement of, a principal reserve currency. It is beyond the scope of this paper to review in detail the ascendancy of the dollar, but recent historical research casts doubt on the conventional wisdom that “there can be only one reserve currency” and that “dominance lost, cannot be regained,” findings that have important implications for the renminbi, dollar, and euro. In a recently published study, Barry Eichengreen and Marc Flandreau find that the dollar displaced the sterling as the largest reserve currency in the mid-1920s, far earlier than previously thought, but that the sterling regained its leading position for a time in the 1930s, before the dollar returned to play an increasingly dominant role in international reserves after World War II. Thus, the dollar first overtook the pound as the United States eclipsed the United Kingdom as the dominant economic, commercial, and financial power, illustrating that the lingering power of inertia and network effects may be less than commonly thought. Second, the economic and financial crises in the U.S. during the Great Depression briefly cost the dollar its leading status during the 1930s. Third, France made serious efforts in the early 1930s to join the “competition” to be a reserve center during this period, after accumulating roughly half of the world’s foreign exchange reserves in its effort to prevent the franc from appreciating. However, despite initially staying on the gold standard and showing healthy economic signs, France followed the U.S. and U.K. with serious economic and financial problems in the 1930s and never emerged as a serious alternative. The lessons from France’s experience are mixed. There clearly is not room for an unlimited number of reserve currencies, and with two credible reserve currencies for central banks to choose from a third “newcomer” faces a high bar in terms of political / economic stability, capital mobility, and deep financial markets. However, with the desires of central banks to diversify, and to adjust their holdings based on their countries’ bilateral and regional trading and investment profiles, there would appear to be an opportunity for the dollar, euro, and yuan to all play significant roles in foreign exchange reserves as the 21st century progresses.

Determinants of Future Reserve Competition

In a 2000 IMF paper, Barry Eichengreen and Donald Mathieson find a “striking stability over time of the relationship between the demand for reserves denominated in different currencies and its principal determinants: trade flows, financial flows and

currency pegs.”²⁴ Data from the 1980s and 1990s suggest that the abandonment of currency pegs (predominantly oriented toward the dollar) in favor of greater exchange rate flexibility tended to reduce the share of the dollar in foreign reserves – a finding relevant to the potential evolution of East Asian exchange rate regimes. The recent buildup of foreign reserves also has interesting implications. Reserves are now commonly perceived to be greater than needed for intervention purposes. The Bank for International Settlements (BIS) reported in 2006 that “reserve managers’ appetite for credit and liquidity risk has been increasing,” and suggested that the focus of reserve management was likely to shift further toward the maximization of returns and away from the preservation of liquidity and capital.²⁵ However, the current financial crisis may delay or even temporarily reverse this trend, spurring the clear “flight to quality” in the dollar, and investment losses by sovereign wealth funds and some central banks will likely reduce their appetite for risk in the near future.²⁶ Other factors suggest that any rebalancing of reserves will occur gradually. First, the market closely follows how central banks manage their reserves, a quick shift out of the dollar by the People’s Bank of China, for example, might create excess volatility, reduce the value of their holdings, and trigger a crisis. Second, euro zone authorities are unlikely to welcome a shift of reserves into the euro at the present time due to the likely euro appreciation and reduction in euro zone competitiveness that would result.

The Road Ahead For the Renminbi

So what is the road ahead for the internationalization of the yuan? The primary issue is when and how to relax China’s capital controls. In addition to making the yuan a “freely usable” currency, opening up the capital account is likely to serve as a catalyst for domestic financial reform, bringing in technical expertise in developing sophisticated financial instruments and markets. However, this decision is intimately wrapped up in the debate over China’s exchange rate, as the Asian Financial Crisis clearly demonstrated the dangers of opening the capital account while keeping a fixed exchange rate, which leaves countries vulnerable to large exchange rate depreciations and sudden stops or reversals in capital flows. Indeed, experienced economists such as Eswar Prasad recommend that China move gradually toward greater exchange rate flexibility in advance of gradually loosening capital controls.

A lot of macro economic variables point to a steadily expanding role for the yuan as capital controls are gradually loosened. In particular, China will likely be able to invoice an increasing amount of its direct bilateral trade in its own currency, even in the absence of full capital account liberalization. The ability of the yuan to achieve even the limited international status of the yen, however, will depend on the continued development of the financial infrastructure and “software” that drives international

²⁴ Eichengreen, Barry, and Donald Mathieson (2000). “The Currency Composition of Foreign Exchange Reserves: Retrospect and Prospect.” IMF Working Paper 00/131.

²⁵ Wooldridge, Philip, “The Changing Composition of Official Reserves,” *BIS Quarterly Review*, September 2006.

²⁶ According the IMF, the dollar accounted for 64% of central bank reserves at the end of 2008, up from 62.8% in June 2008.

currency use. In March 2009, the Chinese government announced a blueprint to make Shanghai an “international financial and shipping center” by 2020, serving at the heart of regional and global trade.²⁷ Increased availability, reliability, and ease of use of short-term financial instruments, both government securities and private money markets and bankers acceptances, will play a critical role in determining the use of the yuan as a settlement and vehicle currency in international trade. China is also positioned, through its massive demand, for its currency to play an increasing role in the pricing and invoicing of commodities. Any serious developments in this area though will require dramatic growth in the scale, sophistication, and transparency of China’s commodities futures markets – a key priority to which the China Securities Regulatory Commission (CSRC) is already devoting considerable effort. The future role of the yuan in foreign exchange (FX) trading is difficult to speculate on, but just as with much of China’s economic and financial development, it has a unique advantage in Hong Kong, which is likely to serve at the forefront of any future yuan FX trading.

The path toward the yuan playing a serious role as a reserve currency is much more difficult still. Economic weight alone is insufficient in this area, with a much higher bar for political/macroeconomic stability, capital mobility, and deep, liquid and sophisticated financial markets. Market trust and credibility is accumulated over many years, and typically by the performance of a reserve currency and country over many “crises.” William Silber provides a fascinating account of the U.S. Treasury’s aggressive efforts to stay on the Gold Standard amidst the financial crisis at the outbreak of World War I in 1914 as a key to the dollar’s ascension to “monetary supremacy.”²⁸ Similarly, historians may look back on the steady hand of Chinese policymakers and China’s relatively stable macroeconomic performance during the 1997-98 Asian Financial Crisis and the current global financial crisis as building blocks of China’s growing economic reputation and leadership over the coming decades.

However, at least some of the many uncertainties facing the Chinese political system and economy over the coming decades must be addressed before yuan-denominated assets could approach the “safety” of dollar or euro reserve assets. To trust in a reserve currency, countries must have complete confidence that that they will be able to rapidly move significant quantities of money into and out of the reserve country’s markets in times of need. At a minimum, this would require close to a complete elimination of capital controls and sharply reduced government involvement in the financial sector, a policy transformation which would come into significant tension with the Chinese government’s penchant for control. Investors would also likely require significant reforms in the rule of law, raising the question of whether an authoritarian government could ever gain the market trust required to be a reserve nation.

International confidence will also require the development of deep and highly liquid markets for short-term Chinese government securities, a process which still has a

²⁷ Li, Cheng, “Reclaiming the ‘Head of the Dragon’: Shanghai as China’s Center for International Finance and Shipping,” *China Leadership Monitor*, Spring 2009.

²⁸ Silber, William (2008), *When Washington Shut Down Wall Street: The Great Financial Crisis of 1914 and the Origins of America’s Monetary Supremacy*, Princeton University Press, Princeton, New Jersey.

long way to go. Arthur Kroeber expands upon this argument to emphasize a key, but to date largely ignored, point – in a fiat currency world (unlike under the gold standard) the dominant reserve currency nation must be a net debtor.²⁹ As the principal reserve asset is a reserve nation’s debt securities, other countries must run current account surpluses so that they can invest in these debt securities. A more likely future for the renminbi would be for it to join the dollar and euro as a reserve currency, without displacing the dollar’s principal role. Such a situation would still require China to accumulate very substantial external liabilities, though not necessarily become a net debtor. Either case would require dramatic (and welcome) changes to China’s growth model and trade policy that produced a 2008 current account surplus reaching 11 percent of its GDP, and with the U.S. current account and fiscal deficits, are at the heart of global macroeconomic imbalances. If China’s leaders are serious about increasing the renminbi’s role as a reserve currency, this goal – rather than undermining U.S. economic interests – might reinforce the Chinese government’s impetus to follow through on the domestic economic and financial reforms that U.S. economists and policymakers believe are essential for sustainable U.S. and global economic growth in the future.

²⁹ Kroeber, Arthur, “Don’t Believe the Renminbi Hype,” *Financial Times*, May 27, 2009. Critics may point out that the British Empire was a net creditor throughout the time the pound served as the global reserve currency, and began to lose this status as it became a net debtor in World War II. However, the British Empire operated under the gold standard, in contrast to the current “fiat currency world” which requires significant amounts of the principal reserve and vehicle currency to provide liquidity in international trade and finance.

About the Author

The author is a participant in the Pacific Forum CSIS Young Leaders Program. He served as Country Director for China Affairs in the Office of the Secretary of Defense from 2007-2009, and previously worked as a legislative aide in the United States Senate Majority Leader's Office and as a management consultant at Monitor Group in New York and Hong Kong. Mr. Kelly earned his B.A., Magna Cum Laude, from Harvard University and completed his masters studies with distinction in China Studies and International Economics at the Johns Hopkins School of Advanced International Studies (SAIS).