Economic Trends

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The Chinese Renminbi and the Fundamental Trilemma

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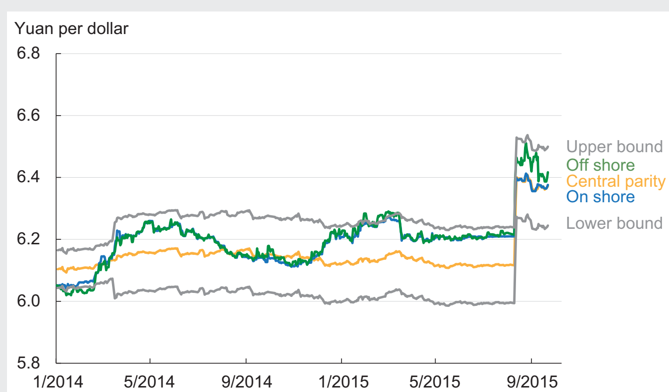
On August 11, 2015, the People's Bank of China (PBOC) devalued the renminbi by nearly 2 percent against the US dollar and altered the calculation of its central parity (or target rate), ostensibly to better reflect market forces. Since then, the renminbi has depreciated about 2½ percent on balance against the dollar. Underlying the PBOC's actions were sustained deviations of the renminbi from the central parity rate, which reflected expectations of worsening Chinese growth prospects and substantial capital outflows. Because the PBOC links the renminbi closely to the dollar, the latter's broad-based appreciation since mid-2014 had pulled the renminbi along with it, hampering China's competitive position against its major trading partners and providing a further drag on economic growth.

China's exchange-rate policies have been a persistent source of controversy in the United States since shortly after the PBOC devalued the renminbi and pegged it to the dollar in 1995. Critics claim that China systematically undervalues the renminbi vis-à-vis the dollar, thereby gaining an unfair trade advantage against the United States. The charges increasingly seem passé.

Chinese Renminbi



Source: Bloomberg.

Undervalued Currency

The first part of these critics' charges is certainly true: China has undervalued the renminbi at least since 2001, as confirmed by China's massive accumulation of foreign-exchange reserves. Because the PBOC undervalues its currency, the subsequent demand for renminbi arising from China's exports and inward investment exceeds the supply of renminbi resulting from China's imports and outward investments. To maintain the peg under these circumstances, the PBOC must supply the requisite renminbi, which it does by buying dollars—and other currencies—in the foreign-exchange market. The upshot has been an unprecedented amassing of foreign-exchange reserves. China's accumulation started to accelerate modestly after the dollar peg in 1995, but it shot skyward after late 2001. By mid-2014, China held $4 trillion worth of foreign exchange, most of which were undoubtedly dollar-denominated assets.

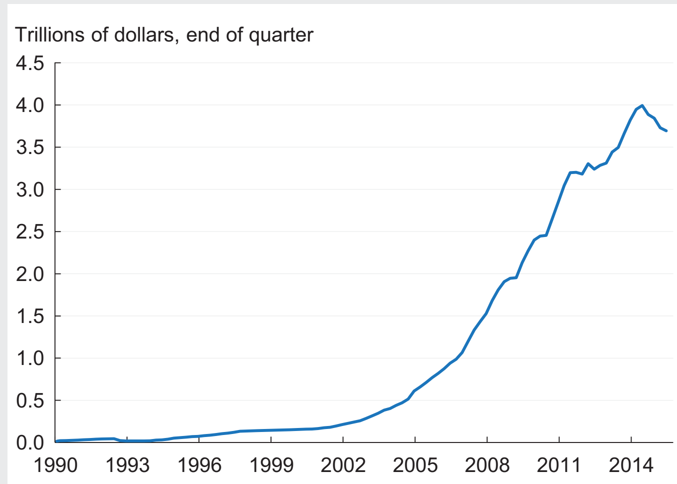
In response to persistent charges of currency manipulation and threats of retaliation, China eased its grip on the renminbi and allowed the currency to appreciate after July 2005. (The PBOC, however, delayed the renminbi's appreciation between 2008 and 2010 during the height of the global financial crisis.) Although the renminbi gained 30 percent in value against the dollar by mid-2014, the tightly controlled appreciation was too small to squelch China's reserve accumulation. The renminbi remained undervalued. The PBOC did give the market slightly more say in the renminbi's value by increasing the bands within which the renminbi could fluctuate, but this had no effect on the exchange rate's overall path.

Late last year, as China's economic prospects darkened, the renminbi started to depreciate against the dollar. The PBOC began selling reserves to drain renminbi from the market and to limit the renminbi's depreciation. With China now losing reserves, claims that the renminbi is undervalued become harder to sell.

Trade Advantage

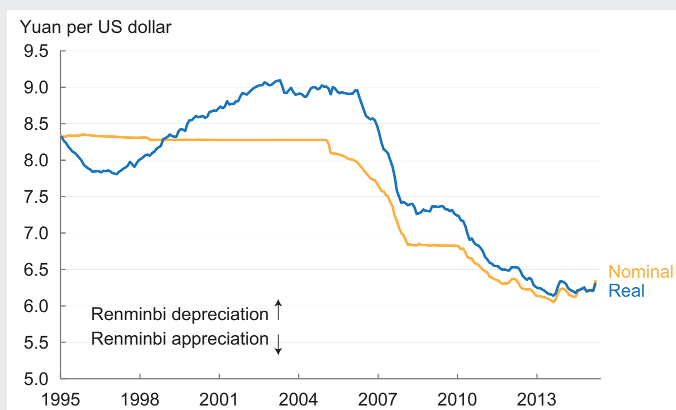
The critics' second claim—that an undervalued renminbi gave China a trade advantage—is a little trickier to substantiate. To be sure, China's markets are not entirely free and unfettered, but its exchange-rate peg gets a bit more heat than it deserves. When the PBOC buys dollars in the foreign-exchange market to keep the renminbi from appreciating, it injects renminbi into the Chinese banking sector and expands the

China's Official Reserves



Source: International Monetary Fund, *International Financial Statistics*.

Renminbi Dollar Exchange Rates



Source: International Monetary Fund, *International Financial Statistics*.

money stock. All else constant, such policies should eventually raise China's inflation rate in a manner that negates any gains that China might get from undervaluing the renminbi. Trade, after all, depends on a comparison of prices at home and abroad, and the exchange rate is only one element in this comparison. Economists often condense the necessary information into a single metric, the real—or inflation adjusted—exchange rate. While the PBOC might peg its market exchange rate, the bank's exchange-market interventions have much less influence over its real exchange rate, and shifts in the real exchange rate—not the market rate—matter for China's competitive advantage.

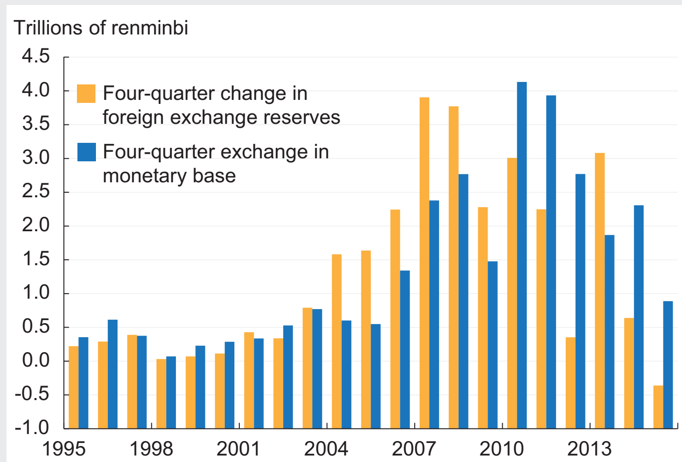
When the PBOC first pegged the renminbi to the dollar, its reserve accumulations were modest. In addition, inflation in China substantially exceeded inflation in the United States, causing the renminbi to appreciate in real terms against the dollar until late in 1997. During these early years, the renminbi was not undervalued, and its peg certainly did not give the Chinese an unfair trade advantage. But between 1997 and 2002, inflation patterns changed and the renminbi depreciated in real terms. Reserve accumulation was on the rise.

Then, from 2003 through 2009, the situation altered again. Reserve accumulation was accelerating sharply, but it did not cause a comparable expansion in the monetary base. That is because China began to offset—or sterilize—the monetary and inflationary implications of its reserve accumulation by selling central-bank bills to the banking sector. During this period, the PBOC sterilized nearly 40 percent of the effect of its reserve accumulation on its monetary base. These sterilization operations seemed to end after 2009 (except briefly in late 2013 and early 2014). The PBOC further blunted the inflationary consequences of its exchange-market interventions by increasing the required amount of reserves that banks had to hold against their deposits between 2003 and late 2008 and again between 2010 and 2014. To be sure, the renminbi started appreciating in real terms by mid-2006, but it probably would have appreciated earlier and moved faster in the absence of these monetary offsets.

Trilemma

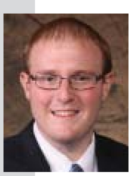
China may want a looser renminbi connection to the dollar going forward. With economic growth slowing in China and with the US economy approaching full employment, the PBOC and the Federal Reserve are

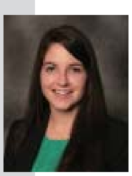
Sterilization of Reserve Flow



Last observation: Four-quarter change to 2015:Q2.
Source: International Monetary Fund, *International Financial Statistics*.

likely to lean in opposite policy directions over the near term. Indeed, the PBOC has cut deposit and lending rates by 1.25 and 1.40 percentage points, respectively, and lowered reserve requirements by 1.5 percentage points since the dollar started to rise. If the PBOC does not want to follow the Federal Reserve's policy lead, then greater exchange-rate flexibility is necessary. Monetary history suggests that countries face a fundamental policy trilemma: They generally cannot maintain independent monetary policies and fixed exchange rates, without also clamping down hard on capital flows. Limiting capital flows is inconsistent with economic efficiency and financial-market development, while weaving between a somewhat-fixed exchange rate and a somewhat-independent monetary policy can create uncertainty on both counts. Most modern market-based economies have solved the trilemma in favor of independent monetary policies, flexible exchange rates, and capital mobility. Bets are that China will eventually go that route too.





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