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# The Chinese Renminbi: What's Real, What's Not

by Patrick Higgins and Owen F. Humpage

On July 21, China devalued its currency—the renminbi—2.1 percent to 8.11 per dollar and revised its procedures for exchange-rate management. The new operating method—supposedly similar to Singapore's—provides China with a more flexible, but less transparent, mechanism for its exchange-market interventions. Since the revaluation, however, the renminbi has not changed much, suggesting that this move might not immediately herald a series of renminbi appreciations.

Many claim that China scores an unfair trade advantage against the United States because it keeps the renminbi at an artificially attractive rate relative to the dollar. If China revalued its currency or allowed it to float freely in the foreign-exchange market, so the argument goes, its competitive edge would dull, and our trade deficit with China—\$180 billion in the twelve months ending May 2005, a full 26 percent of the total U.S. trade deficit in goods—would shrink.

To be sure, China is not a free-market economy; it maintains a network of trade restraints, financial controls, corporate subsidies, state-run enterprises, and state-directed investments that enhance its ability to compete in global markets. These practices are problematic and the legitimate targets of criticism by anyone whom they harm. But complaints about the peg giving China a huge trade advantage against the United States seem overstated.

This *Economic Commentary* argues that revaluing the renminbi or introducing more exchange-rate flexibility will, at best, affect China's trade competitiveness only temporarily and will, in the

process, divert focus from the real problem: China's command economy. To keep the renminbi at its current level, China creates an artificial demand for renminbi through substantial restraints on financial outflows and, to a lesser degree, on imports. As these restraints weaken while trade continues to expand, China will find the nominal peg increasingly difficult to maintain. To understand why these restraints matter more than the peg, we must first distinguish between the nominal and the real renminbi exchange rate.

## ■ What's Real?

Between mid-1995 and the recent devaluation, China maintained the exchange value of the renminbi at approximately 8.3 per dollar. This pegged value and the recent 8.1 renminbi-dollar exchange rate tell us nothing about China's competitiveness relative to the United States because they ignore price patterns in the two countries. If the renminbi cost of goods in China were rising faster than the dollar price of the same goods in the United States, any initial trade gain associated with a fixed exchange rate would soon erode away. The real renminbi-dollar exchange rate adjusts the peg value for U.S. and Chinese inflation differentials, thereby providing a clearer picture of China's competitive position. All else constant, a real appreciation of the dollar relative to the renminbi places the United States at a competitive disadvantage vis-à-vis China, while a real depreciation has the opposite effect.

On a real basis, the dollar appreciated only 2.6 percent against the renminbi between June 1995 and May 2005; such a small movement cannot confer much of

**China's recent devaluation and liberalization of its exchange-rate policies will, at best, have only a temporary impact on its trade competitiveness with the United States. The type of exchange-rate regime that a country adopts matters little for its long-term international competitiveness. In addition, the recent focus on China's exchange rate diverts attention from the real problem: China's command economy.**

a trade advantage on China (see figure 1). The real exchange rate has, however, undergone some large swings over the past decade. Between June 1995 and October 1997, the dollar depreciated 11.4 percent against the renminbi on a real basis because China's inflation rate exceeded the U.S. inflation rate (see figure 2). Between October 1997 and October 2003, however, China's inflation rate dipped below the U.S. inflation rate, causing the dollar to appreciate 17.2 percent on a real basis against the renminbi. Since October 2003, China's inflation rate has generally exceeded ours, and the dollar has again depreciated 1.1 percent against the renminbi in real terms. The recent revaluation moves the real renminbi-dollar exchange rate approximately back to its mid-1995 level.

Critics might complain that our calculations are flawed because we do not correct for China having set the initial renminbi-dollar exchange rate at an artificially favorable level. Many contend that the initial peg undervalued

**FIGURE 1 RENMINBI-DOLLAR EXCHANGE RATES**



SOURCES: International Monetary Fund, “International Financial Statistics”; U.S. Department of Labor, Bureau of Labor Statistics; the National Bureau of Statistics of China; and Board of Governors of the Federal Reserve System, “Foreign Exchange Rates,” *Federal Reserve Statistical Releases*, H.10.

**FIGURE 2 INFLATION RATES**



SOURCES: International Monetary Fund, “International Financial Statistics”; U.S. Department of Labor, Bureau of Labor Statistics; and the National Bureau of Statistics of China.

the renminbi, and if China had originally pegged its currency to the dollar at a lower, more reasonable value, say, 7.3 to 1 instead of 8.3 to 1—that is, had substantially revalued the renminbi—our simple calculations might show an entirely different outcome, one more consistent with their allegations.

To claim that China undervalued its peg and continues to do so, analysts must somehow divine the long-run “equilibrium” value of the renminbi-dollar exchange rate. This often involves a number of rather arbitrary judgments and assumptions about the underlying economic model. Typically, the calculations involve comparing relative inflation patterns in China and the United States, possibly with some allowance for productivity trends in both countries, and estimating a “sustainable” configuration for Chinese balance-of-payments relationships.

Determining an equilibrium exchange rate for a developed, market-based, financially mature country is challenging, but doing so for a developing country like China, which is undergoing serious structural change, is next to impossible. Since it embarked on an economic liberalization program in

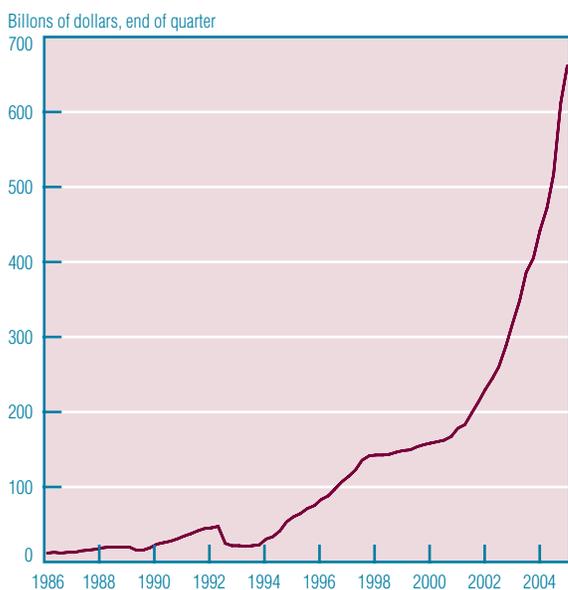
1978, China has been inching away from a system of state-directed economic activity, where prices and exchange rates had virtually no role in resource allocation, to a more market-friendly model. What might constitute an equilibrium under one economic structure need not hold under another. Consequently, the continuing fundamental and structural changes that China has undertaken must make any calculation of an equilibrium renminbi-dollar exchange rate highly suspect. As the International Monetary Fund recently noted, “...it is difficult to arrive at any firm and robust conclusions about the equilibrium level of the renminbi using existing techniques.” Underlining the point, recent estimates of the renminbi’s undervaluation are rather imprecise, ranging at least from 5 to 40 percent. Five years ago, however, many thought that the renminbi was overvalued.

Even if China undervalues the renminbi with the intention of making products and investment opportunities in the country cheap, any trade advantage would erode as prices adjusted; furthermore, the greater the undervaluation, the faster any gain would dissipate. If China undervalues the renminbi, the local price

of its goods will tend to rise as Chinese exports and investment opportunities attract worldwide demand. Moreover, to keep the renminbi stable relative to the dollar in the face of an overall balance-of-payments surplus, the People’s Bank of China—the country’s central bank—must buy dollars on the foreign-exchange market. China has indeed been doing so and, as a result, its official holdings of international reserves have risen dramatically (see figure 3). The process, however, expands China’s money stock and can eventually cause inflation. This inflation-generating mechanism should prevent China from realizing a long-term trade advantage from undervaluing the renminbi. Empirical estimates suggest that any such advantage would disappear with a half-life of approximately four years.

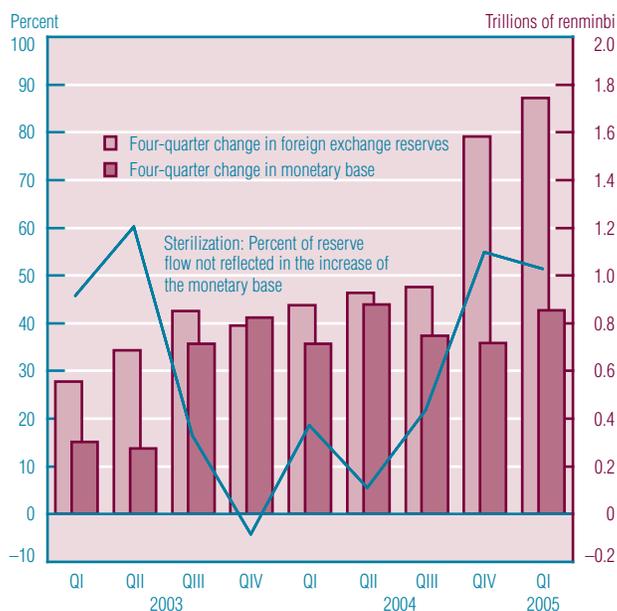
This, however, has not happened, further suggesting that the renminbi might not have been so far out of line at 8.3 per dollar. Between 1995 and 1997, China’s inflation rate fell, and between 1997 and 2003, China experienced two mild deflations. Overall, since 1997, China’s inflation rate has almost always remained within 4 percentage points of the U.S. rate, and when the rates have diverged,

**FIGURE 3 CHINA'S OFFICIAL RESERVES**



SOURCE: International Monetary Fund, "International Financial Statistics."

**FIGURE 4 STERILIZATION OF RESERVE FLOWS**



SOURCE: International Monetary Fund, "International Financial Statistics."

China's has tended to return close to the U.S. inflation rate (see figure 2). Countries that keep their exchange rate pegged or very stable typically experience such a general correspondence between their inflation rates.

**What's Not Real?**

Of course, the People's Bank of China might attempt to offset the inflationary impact of its dollar gains, and thereby the appreciation of the real renminbi, by selling domestic assets from its portfolio or by increasing nonmonetary liabilities on its balance sheet. Such actions, called sterilization or sterilized intervention, will jeopardize the exchange-rate peg unless accompanied by restrictions on imports and controls on financial outflows.

The People's Bank generally did not sterilize the monetary consequences of its reserve purchases until relatively recently. Between the second quarter of 1995, when the peg began, and the third quarter of 2004, China's central bank acquired the equivalent of Rmb 4.6 trillion in foreign exchange—believed to be mostly dollars. This caused China's monetary base to expand 14 percent per year. Most of this money growth, however, has accommodated the increase in the demand for money that is associated with China's rapid economic growth. Chinese inflation has actually moderated since 1995.

Since mid-2002, however, the People's Bank of China has sterilized part—sometimes a substantial part—of the increase in its foreign exchange reserves, preventing them from raising its monetary base (see figure 4). In addition, the People's Bank has attempted to blunt the inflationary consequences of its dollar accumulation by increasing bank reserve requirements, which reduces the amount of bank loans that a given change in the monetary base can support, and by directly attempting to curb investment spending.

Most economists contend, however, that sterilized intervention will not work. If—as has been the case—maintaining a stable exchange rate requires the People's Bank to buy dollars with renminbi, the exchange rate cannot remain unchanged should the Bank then reabsorb these renminbi reserves through other operations. Instead, the Chinese government must promote stability by creating a persistent demand for these renminbi at the existing exchange rate. China does this primarily through artificial restraints on financial flows. In

general, Chinese policies favor net inflows of foreign direct investment, encourage exports over imports, and—most importantly—discourage other types of private financial outflows, largely by limiting the amount of dollars that China's residents might hold and their ability to invest in foreign assets. Remove the restraints and corresponding policies, and the demand for renminbi will fall relative to the supply, and domestic prices will rise. The adjustment will drive the real renminbi exchange value and China's balance of payments to a new, market-determined equilibrium.

**Conclusion**

Arguing that China's exchange-rate policies undervalue the renminbi for a strategic trade advantage is a hard sell because, beyond the very short run, nominal exchange rates do not seem to matter much for trade. A more solid argument might be that China's network of restraints on private financial outflows and policies that promote net exports interfere with the natural adjustment of the real exchange rate. As China's restraints continue to weaken, either out of compliance with its World Trade Organization commitments or the market's proclivity to scale such barriers, and as the country's international trade and investments grow, tightly managing the nominal exchange rate without increases in Chinese prices—and a real appreciation—will prove increasingly difficult. Sterilizing reserve gains will become useless. At that point, which may not be far off, increased exchange-rate flexibility will be necessary.

**Recommended Reading**

*Our IMF quotation is from:*

Tao Wang, 2004. "Exchange Rate Dynamics," in Eswar Prasad, ed., *China's Growth and Integration into the World Economy, Prospects and Challenges*. International Monetary Fund Occasional Paper 232.

*Our half-life estimate is from a standard survey of purchasing power parity:*

Kenneth A. Froot and Kenneth Rogoff. 1995. "Perspectives on PPP and Long-Run Real Exchange Rates," in Gene M. Grossman and Kenneth Rogoff, eds. *Handbook of International Economics, Volume III*, New York: Elsevier Publishing Co.

*See also:*

Ben Craig. 2005. "The Growing Significance of Purchasing Power Parity," Federal Reserve Bank of Cleveland, *Economic Commentary* (April 1).

*Interested in something related, but more rigorous? We recommend:*

Michael P. Dooley, David Folkerts-Landau, and Peter Garber. 2003. "An Essay on the Revived Bretton Woods System," National Bureau of Economic Research Working Paper No. 9971 (September).

Barry Eichengreen. 2004. "Chinese Currency Controversies," Centre for Economic Policy Research, Discussion Paper No. 4375 (May).

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