



Policy Brief

Stanford Institute for Economic Policy Research

China's Exchange Rate Trap: Japan Redux?

by Ronald McKinnon, Stanford University¹

Introduction

Today's American mercantile pressure on China to appreciate the renminbi against the dollar is eerily similar to the American pressure on Japan to appreciate the yen that began in 1971 at the end of the Bretton Woods period of fixed exchange rates and ended in 1995. But the overvalued yen and the expectation of uncertain appreciation destabilized the Japanese financial system, and the bubble economy of the late 1980s was followed by a deflationary slump and a zero-interest liquidity trap in the 1990s. Moving from a fixed exchange rate to an uncertain flexible exchange rate could subject China's economy to some of the same risks.

At least some of today's critics of East Asian countries' pegging to the dollar would agree that international saving imbalances rather than misaligned exchange rates are the root cause of the U.S. current-account deficit. As Federal Reserve Board Chairman Ben Bernanke has discussed, the current account deficit could arise from a saving deficiency in the United States or a saving glut in the rest of the world. However, suppose that the U.S. trade deficit is misdiagnosed to result from a misaligned exchange rate. A surplus country on the dollar's periphery would be forced to appreciate its currency, but this will have no predictable effect on its trade surplus — as with Japan from the 1970s to the mid-1990s.

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Since 2000, China bashing has not yet caused significant exchange appreciation despite a bill introduced into the U.S. Congress in March 2005 to impose a 27.5 percent tariff on all Chinese imports unless the renminbi is appreciated. However, after keeping the renminbi fixed at 8.28 yuan per dollar for more than 10 years during a period of very high growth and declining inflation, the People's Bank of China (PBC) announced in July 2005 that the rate would become more "flexible" — and allowed a 2.1 percent appreciation. Subsequent appreciation has been very small. The PBC has kept a tight rein on the spot exchange rate within a narrow trading range of ± 0.3 percent.

In November 2005, the PBC liberalized capital controls enough to create a swap market in forward exchange. With the spot rate at 8.08 yuan per dollar, it sold \$6 billion to a group of 10 domestic banks and promised to buy the dollars back one year hence at 7.85 yuan per dollar. This forward discount on the dollar of 2.9 percent implies that the PBC will tolerate gradual ongoing annual appreciation cumulating to a total of 2.9 percent. However, great uncertainty is involved: Actual appreciation could be more or less, and it could be gradual or more discrete. American critics want much greater appreciation, closer to 20 to 35 percent.

The upshot is that market participants now *know* that the renminbi will be higher against the dollar in the future — a one-way bet reinforced by China's growing trade surplus and foreign pressure. This expectation itself can influence China's economy even *before* substantial appreciation actually occurs.

Wage Adjustment Under a Fixed Exchange Rate

International saving imbalances aside, suppose a country, such as China with low wages but very high productivity growth, trades with a country such as the United States with much lower productivity growth but higher real

wages. When wages are "sticky" as traditional theory would have it, exchange rate flexibility with ongoing appreciation of the renminbi would be more or less necessary to balance international competitiveness.

In the high-growth economy, however, wages are flexible. International competitiveness can be roughly balanced in the short run when high wage increases match high productivity growth. In the very long run, the level of money wages in the high-growth peripheral country will converge to the level in the slower growing center. But the key is to ensure that monetary and exchange rate conditions are right, so that high wage growth accurately reflects productivity gains.

When the yen was fixed from 1950 to 1971 under Bretton Woods, the importance of relative wage adjustment between Japan and the United States was pronounced. In that period, Japan's annual growth in real output was 9.45 percent while industrial production grew an astonishing 14.6 percent — much like China's more recently. Unsurprisingly, the annual growth in Japan's labor productivity of 8.9 percent was far in excess of America's 2.6 percent. However, the balancing item was that average money wages grew at a robust rate of 10 percent per year in Japan and only 4.5 percent in the United States.

Figure 1
Wage Differential between Japan and U.S.,
and Yen/Dollar Rate

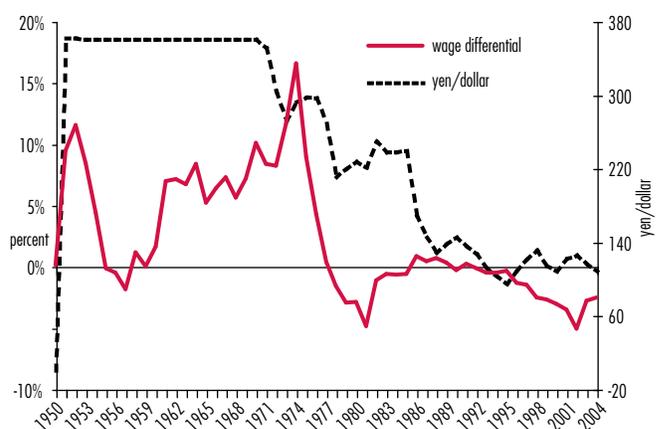


Figure 1 shows the relatively high wage growth in Japan during the fixed rate period tailing off sharply to become less than that in the United States after the yen began to appreciate. The yen was forced to appreciate all the way from 360 to the dollar in 1971 to reach 80 per dollar in 1995. This forced Japan into a deflationary slump and its “lost decade” of the 1990s.

From 1994 to July 2005, China kept its exchange rate stable at 8.28 yuan/dollar. Figure 2 shows China’s inflation (measured by its CPI) to be high in 1994-96 and after 1998 to converge close to that in the United States — *equilibrium* in the sense of relative purchasing power parity. Coupled with the greater economic openness since the mid- 1990s, the fixed exchange rate policy helped end the “roller coaster” ride in China’s domestic inflation and GDP growth characteristic of the 1980s and early 1990s as shown in Figure 3. No doubt other explanations of the end of China’s roller coaster ride in both inflation and real growth rates are possible. However, the data are consistent with my hypothesis that fixing the nominal exchange rate provided a much-needed nominal anchor when very rapid financial transformation made purely domestic monetary control mechanisms difficult to implement — as was also true of Japan in the 1950s and 1960s.

Figure 2
China – US Inflation Differential and Exchange

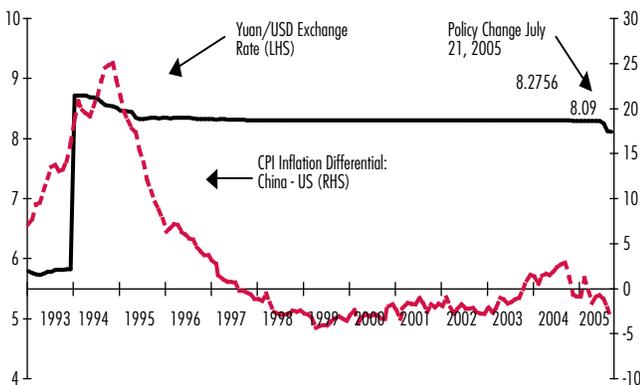
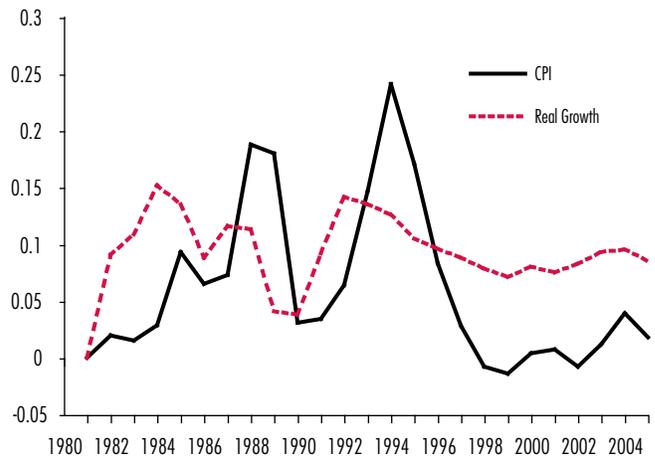
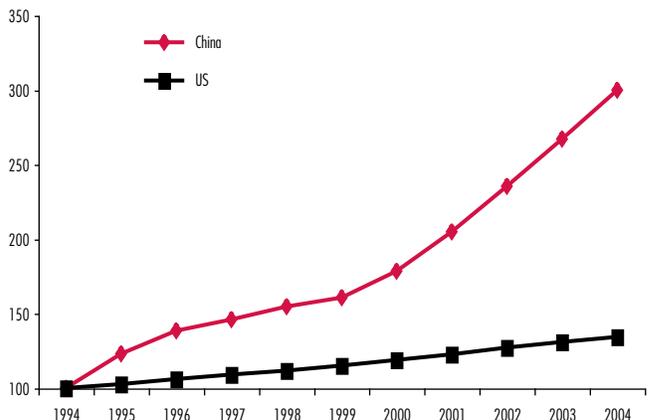


Figure 3
Inflation Rate and Real Growth Rate of China



But to preserve the exchange rate anchor, China’s nominal wages had to grow in line with its rapid productivity growth. From 1994 through 2004, nominal wages in manufacturing increased 11.7 percent in China per year and by just 3.0 percent in the United States (Figure 4). This wage growth differential approximately reflected the differential growth of labor productivity — about 9.5 percent in China versus 2.7 percent in the United States over the decade. Much of this extraordinary growth in Chinese wages reflects the upgrading of skills and greater work experience of the manufacturing labor force.

Figure 4
Nominal Manufacturing Wage Growth for U.S. and China



Because risk-averse employers in export activities don't know how much the renminbi will actually appreciate, they hesitate to bid money wages up by the full amount of productivity growth in tradables. If the rate of appreciation was certain, say the renminbi was sure to appreciate by 2.9 percent per year, then there would be no wage risk premium. Nominal wages would increase less than productivity growth by 2.9 percentage points. On a balanced deflation path, prices would fall 2.9 percent year while real wages grew as much as labor productivity.

But the rate of renminbi appreciation in China is uncertain, the wage risk premium is not zero. It is still too soon (2005-2006) to get any firm estimate of the shortfall in wage increases in China from the uncertainty in exchange appreciation. However, the earlier Japanese experience of massive actual appreciations after 1970, which only later became more or less fully anticipated, provides a very rough comparison. The erratically appreciating yen undermined the natural process of relative wage adjustment for balancing international competitiveness between Japan and the United States, and the resulting deflationary pressure severely depressed the Japanese economy in its lost decade of the 1990s.

The Negative Risk Premium in Interest Rates

Under the world dollar standard, creditor countries like China or Japan don't lend much in their own currencies. Instead, their cumulative current account surpluses are largely financed by building up liquid dollar claims, privately or as official exchange reserves the problem of "conflicted virtue." Thus, if the yuan/dollar rate fluctuates, private holders of dollars in China see additional risk. For portfolio equilibrium, the interest rate on renminbi assets must be less than that on dollar assets.

Financial liberalization is an important and laudable objective for improving the efficiency of China's capital markets in the long run. Now, however, with

China's economy threatened by ongoing appreciation of the renminbi, liberalizing the financial system could have perverse short-run consequences. In the face of undiminished foreign exchange risk, i.e., the probability that the renminbi could appreciate, a near zero-interest-rate liquidity trap is possible. China's interbank interest rate at the end of March 2006 fell to 1.61 percent, as the U.S. federal funds rate (coming off all-time lows) rose to 4.75 percent.

If interest rates on renminbi assets don't fall immediately, short-term capital (hot money) flows into China, as investors try to switch their dollars into renminbi. To avoid an upward exchange rate spiral, the PBC must buy dollars in the foreign exchange market. The huge buildup of dollar exchange reserves, now well over US \$800 billion, and consequent internal expansion of the domestic monetary base then drives down domestic short-term interest rates until they hit zero.

But another equilibrium, where Chinese interest rates remain low but above zero, is possible. This was suggested by the swap contract between the PBC and the commercial banks described above. If new swap contracts are initiated each month so that the forward discount on the dollar is always 2.9 percent (the rate of expected and actual annual appreciation of the renminbi, then the PBC could secure domestic private portfolio equilibrium by keeping China's interest rate always 2.9 percentage points less than America's rate. Coincidentally, the actual interest differential at the end of March 2006 was about 3.1 percent. However, if the exchange rate moves erratically and unpredictably, then the negative risk premium becomes more important and Chinese interest rates could fall further. In the new millennium, this foreign exchange risk explains the current persistence of Japan's zero-interest liquidity trap even in the absence of any secular tendency for the yen to appreciate.

A Concluding Note

For creditor countries on the periphery of the dollar standard, countries such as China that have current account surpluses, foreign mercantile pressure to appreciate their currencies and become more flexible is misplaced. Just the expectation of (ongoing) exchange appreciation with high variance seriously disrupts the natural tendency for wage growth to balance productivity growth and thus worsens the (incipient) deflation that China now faces. It could create a zero-interest liquidity trap in financial markets that leaves the central bank helpless to combat future deflation arising out of actual currency appreciation, as in the earlier experience of Japan. Exchange rate appreciation, or the threat of it, causes macroeconomic distress without having any predictable effect on the trade surpluses of creditor economies.

So what should China do? The first-best economic solution would have been to keep the central parity rate of 8.28 yuan per dollar, as it was for the 10 years or so before July 21, 2005. If a fixed exchange rate is fully credible, both China's inflation and interest rates would converge to international levels. This would eliminate the threat of deflation and eliminate the possibility of

a zero-interest liquidity trap with its attendant loss of monetary control. In the future, China may again have the opportunity at a politically propitious moment to fix its central exchange rate within a narrow band.

However, this first-best economic solution may not now be politic. Since July 21, 2005, China's government appears to want the exchange rate to be more "flexible" and appreciate — perhaps because of foreign political pressure. Then, the second-best solution is to allow a slow gradual predictable appreciation of the renminbi against the dollar but to embed the rate in continually rolled forward swap contracts between the People's Bank of China and the commercial banks — as per the 2.9 percent solution described above. The uncertainty associated with future exchange rate movements is thereby reduced so that the negative risk premiums in both interest rates and wage growth are minimal. But China will then have to live with mild price deflation relative to that in the United States and where interest rates on renminbi assets remain 2.9 percentage points or so less than those on dollar assets. In the future, however, if either U.S. interest rates come back down toward 3 percent or China speeds up renminbi appreciation, a zero-interest-rate trap will be difficult to avoid.

About the Author

Ronald McKinnon is the William D. Eberle Professor of International Economics at Stanford University, where he has taught since 1961. He is also a SIEPR/SCID Senior Fellow.



His fields of interest are international economics and development finance. McKinnon has written over 100 articles and several books, which include: *Money and Capital in Economic Development* (1973); *Money in International Exchange: The Convertible-Currency System* (1979); *The Order of Economic Liberalization: Financial Control in the Transition to a Market Economy*, 1993; *The Rules of the Game: International Money and Exchange Rates*, 1996; *Dollar and Yen: Resolving Economic Conflict Between the United States and Japan* (with Kenichi Ohno), 1997; and *Exchange Rates under the East Asian Dollar Standard: Living with Conflicted Virtue*, in 2005.

His books have been translated into many European and Asian languages, and he has been a consultant to central banks and finance ministries the world over-including international agencies such as the World Bank and International Monetary Fund.

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