
Monetary Policy Independence, the Currency Regime, and the Capital Account in China

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The Chinese economy has performed remarkably over the last two decades, with annual GDP growth averaging nearly 10 percent. The particular combination of macroeconomic and structural policies that has generated this growth has clearly worked well. But rapid growth can hide, and in some cases even exacerbate, a number of deeper problems. China's financial sector is in poor shape and has distorted domestic demand; the patterns of investment financing could lead to a resurgence of nonperforming loans (NPLs) in the future and, by fueling a buildup of excess capacity in some sectors, could generate deflationary risks in the medium term. In the short term, some pressures are becoming evident in other forms, such as asset price booms, particularly in equity markets.

The sustainability of growth, while an important concern, may not even be the key problem, as indirect and subtle costs in the current growth

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model deserve attention. Tight management of the exchange rate has been facilitated by financial repression and a relatively closed capital account. Among other things, this has meant very low real rates of return for households, which save a lot and have few investment opportunities other than domestic bank deposits. The policies have also curtailed financial sector development, leading to inefficient intermediation of domestic capital. Clearly, large welfare costs are associated with these constraints.

The growth strategy has also involved a number of policy distortions and constraints that have greatly reduced the room for policy maneuver if any large shocks hit the economy. Such shocks could come from internal sources, such as loss of confidence in the banking system or social instability generated by rising inequality. They could also arise from external sources, such as international capital-market crises, a collapse of external demand, US trade sanctions, or flaring tensions over Taiwan. Monetary policy is typically the first line of defense against such shocks, but constrained by maintaining a tightly managed exchange rate, it can at best play a very limited role for China. There appears to be room for fiscal maneuver because the explicit levels of the fiscal deficit and government debt are quite low, but these may be deceptive, as there are large contingent liabilities in the state-owned banking system and huge unfunded pension liabilities. The financial system is still dysfunctional in many ways and may not be deep or robust enough to withstand a significant shock.

What should China do to prepare itself to deal with shocks and make its growth more balanced and sustainable? The banking system should be made more robust and driven by market principles, and the financial system should be broadened to create both alternative sources of funding for firms and alternative investment opportunities for households and firms. The state-owned enterprise sector needs to be further corporatized by hardening budget constraints. There is a need for a better social safety net and a better system for delivery of social services.

Many of the reforms are interrelated and trying to implement them in isolation is not an effective way to proceed. Stable macroeconomic policies and a well-developed and efficient financial sector are essential ingredients for balanced and sustainable growth, but these two intermediate objectives would be helped by effective monetary policy and further capital account liberalization, which in turn require a flexible exchange rate. Ignoring these linkages—for instance, by trying to push forward with banking reforms while holding monetary policy hostage to an exchange rate objective—makes an already difficult reform process even harder. Similarly, financial repression has kept the real price of capital cheap and, along with subsidized energy and land prices, shifted production toward capital-intensive methods. This works at cross purposes with the authorities' goal of boosting employment growth and facilitating the transition of the rural unemployed and underemployed to employment in manufacturing and services.

Ultimately, the essence of the policy debate can be framed in terms of the pace and sequencing of reforms required to turn China's economic strengths into forces that allow the growth miracle to be sustained and reduce the risks of its being derailed by shocks.

Investment-Led Growth

One dimension of the Chinese growth story of particular relevance to the arguments in this chapter is the composition of growth. Investment in physical capital has been a major contributor to growth during this decade, in some recent years accounting for nearly two-thirds of nominal GDP growth. Private consumption, by contrast, has made a much smaller contribution to growth.¹ One consequence of the investment-heavy expansion has been relatively slow employment growth.² From 2000 to 2005, growth of total nonagricultural employment averaged only 3 percent per annum compared with average nonagricultural GDP growth of about 9.5 percent.

Why has investment growth been so strong? A substantial fraction of the investment in China has been financed by credit from state-owned banks offered at low interest rates. Cheap capital has played a big part in skewing the capital-labor ratio and holding down employment growth (Aziz 2006). Recent increases in the base lending rate have been far too small to raise the real price of capital to a meaningful level for an economy experiencing annual real growth of over 10 percent (figures 2.1a and 2.1b). Local governments provide subsidized land to encourage investment. And energy prices continue to be administered and made available to enterprises at prices below international levels.

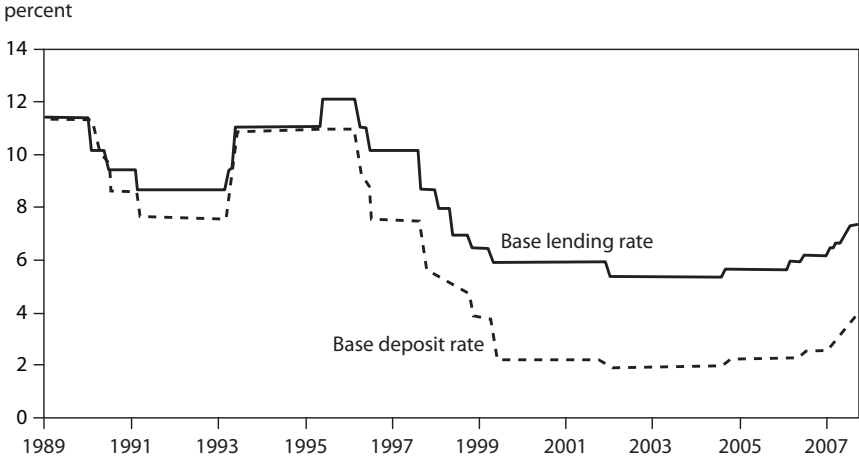
Much of the recent investment has also been financed through retained earnings of profitable firms, which ought to be more defensible on the basis of the opportunity cost of alternative uses for those funds. However, even here the picture is not clear. Until very recently, profitable state enterprises were not required to pay dividends to the state. This suggests that investment may have been spurred by the minimal rates of return on bank deposits, which made even marginal investment projects seem in the money. The risk, of course, is that such high rates of investment in industries with favorable demand conditions may lead to a buildup of excess capacity in those industries, which could become evident in the event of adverse demand shocks (Goldstein and Lardy 2004).

National saving rates have been even higher than investment rates, as both household and corporate savings have risen in recent years. The uncertainties engendered by the transition to a market economy, the limited

1. For details on the composition of growth, see Aziz (2006) and Lardy (2006).

2. See Brooks (2004) for some detailed calculations.

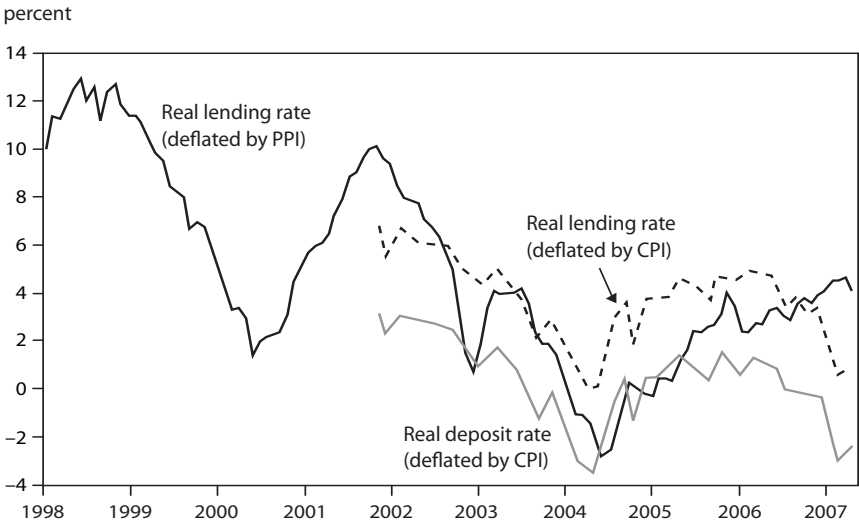
Figure 2.1a One-year base lending and deposit rates, 1989–2007



Note: Data are for January of years indicated.

Source: CEIC data.

Figure 2.1b One-year real lending and deposit rates, 1998–2007



CPI = consumer price index

PPI = producer price index

Note: Real rates calculated by deflating the nominal rates by 12-month trailing CPI or PPI inflation. Data are for January of years indicated.

Sources: CEIC data and author's calculations.

availability of instruments to borrow against future income to finance purchases (e.g., major durable goods and housing), and the lack of international portfolio diversification opportunities have all contributed to high household savings (Chamon and Prasad 2007). Financial system repression has meant that there are few alternatives to funneling these savings into deposits in the state-owned banking system.

Households willingly hold bank deposits despite the weaknesses of the banking system because of the government's implicit deposit insurance. This provides abundant liquidity for banks to expand credit, which largely finances investment by state enterprises because of the distorted incentives that lenders face. As mentioned above, profitable state enterprises are not required to pay dividends, encouraging them to plow retained earnings (which are counted as enterprise savings) back into investment. Thus, the investment boom in recent years has been fueled by cheap credit and overoptimistic expectations of future demand growth in sectors that are doing well at present.

Macroeconomic Policies

China has had a relatively stable exchange rate against the US dollar since 1995. Since 2001 the exchange rate has been kept from appreciating only by massive intervention in the exchange market. Such intervention in tandem with sustained high export growth and a burgeoning current account surplus likely to hit 12 percent of GDP in 2007 (table 2.1), indicates a substantially undervalued currency. Figures 2.2a and 2.2b show that despite an appreciation of the renminbi against the dollar since June 2005, the real effective exchange rate of the renminbi is now below its recent peak in 2002, largely due to the dollar's depreciation against other major currencies.

Resisting pressures for exchange rate appreciation has fueled a surge in the accumulation of international reserves since 2001 (figure 2.3). Table 2.2 shows that, from 2001 to 2004, inflows of speculative capital in anticipation of eventual renminbi appreciation accounted for most of the pickup in the pace of reserve accumulation relative to the period from 1998 to 2000. During 2005–06, speculative inflows shrank, but the slack was more than taken up by a dramatic surge in the trade balance, which doubled the rate of reserve accumulation from 2001 to 2004. The inflows resulting from these factors have added to the liquidity in the banking system and further complicated the control of credit growth.

Why have these inflows not led to rampant inflation? The answer lies in the ability of the People's Bank of China (PBC) to sterilize these inflows. In most emerging market economies, such sterilization usually runs into limits quickly. Government bonds that are used to soak up liquidity have to offer increasingly higher yields to convince domestic economic agents to hold them, leading to ever-increasing costs to the budget.

Table 2.1 Balance of payments, 1997–2007 (billions of US dollars)

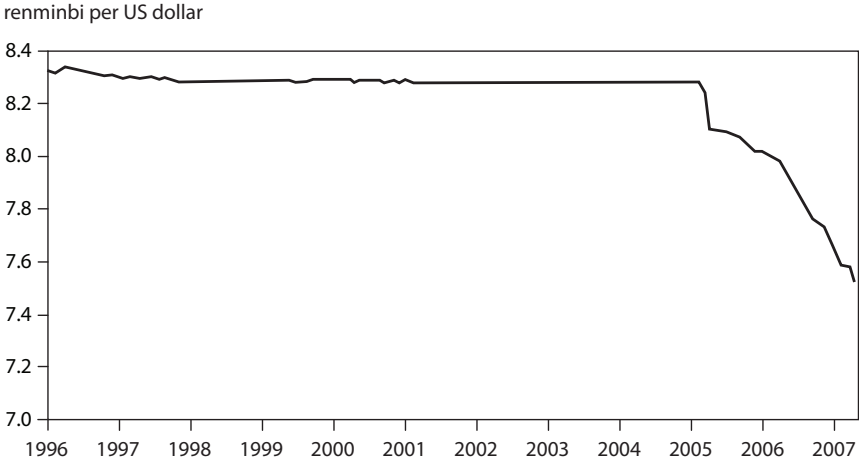
Item	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Gross international reserves	143.4 (15.0)	149.8 (14.7)	158.3 (14.6)	168.9 (14.1)	218.7 (16.5)	295.2 (20.3)	412.2 (25.1)	618.6 (32.0)	825.6 (36.8)	1,072.6 (40.8)	1,338.7 n.a.
Change in international reserves	34.9	6.4	8.5	10.5	49.8	76.5	117.0	206.3	207.0	247.0	266.1
A. Current account balance	37.0 (3.9)	31.5 (3.1)	21.1 (1.9)	20.5 (1.7)	17.4 (1.3)	35.4 (2.4)	45.9 (2.8)	68.7 (3.6)	160.8 (7.2)	249.9 (9.5)	162.9 n.a.
Merchandise trade balance	46.2 (4.9)	46.6 (4.6)	36.0 (3.3)	34.5 (2.9)	34.0 (2.6)	44.2 (3.0)	44.7 (2.7)	59.0 (3.1)	134.2 (6.0)	217.7 (8.3)	135.7 n.a.
B. Capital account balance	21.0	-6.3	5.2	2.0	34.8	32.3	52.7	110.7	63.0	10.0	90.2
Net foreign direct investment (FDI)	41.7	41.1	37.0	37.5	37.4	46.8	47.2	53.1	67.8	60.3	51.0
C. Errors and omissions, net	-22.3	-18.7	-17.8	-11.9	-4.9	7.8	18.4	27.0	-16.8	-12.9	13.1
<i>Memorandum items:</i>											
Non-FDI capital account balance (including errors and omissions)	-42.9	-66.1	-49.6	-47.4	-7.4	-6.7	23.9	84.6	-21.6	-63.2	52.3
Nominal GDP	953	1,019	1,083	1,198	1,325	1,454	1,641	1,932	2,244	2,626	n.a.

n.a. = not available

Notes: Figures in parentheses are percent of GDP. Data for 2007 are end-June data. The non-FDI capital account balance is the capital account balance minus net FDI plus net errors and omissions.

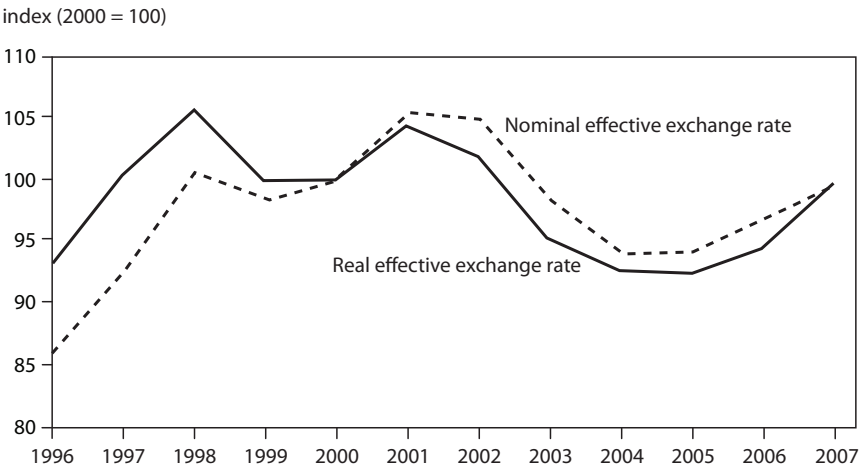
Sources: CEIC data; International Monetary Fund, *International Financial Statistics*; author's calculations.

Figure 2.2a Renminbi-US dollar exchange rate, 1996–2007



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

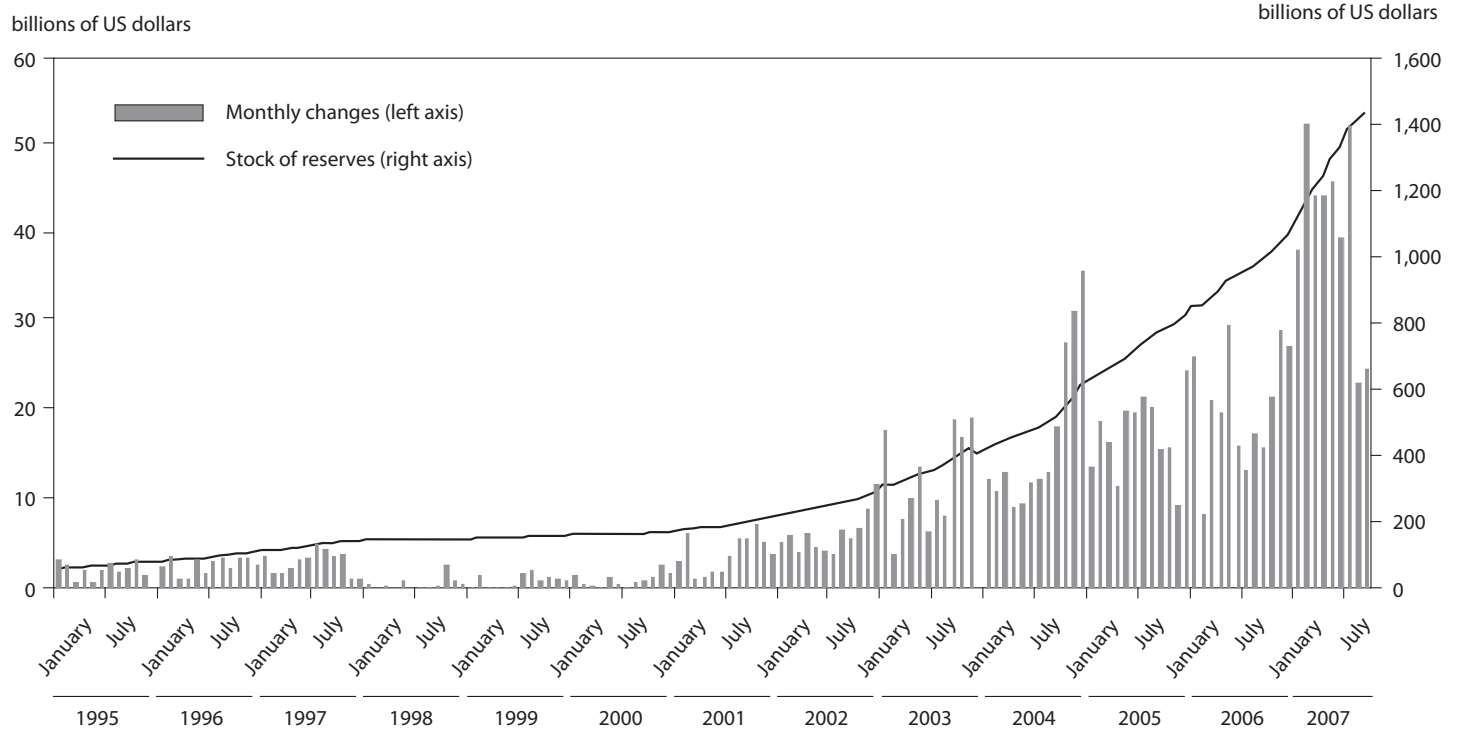
Figure 2.2b Real and nominal effective exchange rates, 1996–2007



Note: Data for 2007 are for end-July.

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

However, in China, private saving rates, both household and corporate, continue to be very high; most of these savings invariably flow into the banking system, as there are few alternatives. This has made the banks flush with liquidity at a time when they are under pressure to hold down growth in credit. Banks also have an incentive to hold PBC bills rather

Figure 2.3 Foreign exchange reserves: Flows and stocks, 1995–2007

Sources: CEIC data and author's calculations.

Table 2.2 Decomposition of the recent reserve buildup
(billions of US dollars)

Item	Annual average			Change	
	1998–2000	2001–04	2005–06	2001–04 minus 1998–2000	2005–06 minus 2001–04
	(1)	(2)	(3)	(2)–(1)	(3)–(2)
Increase in foreign reserves	8.5	112.4	227.0	103.9	114.6
Current account balance	24.4	41.9	205.4	17.5	163.5
Capital account balance	0.3	57.7	36.5	57.4	–21.2
Net foreign direct investment (FDI)	38.5	46.1	64.1	7.6	17.9
Errors and omissions, net	–16.1	12.1	–14.9	28.2	–26.9
Non-FDI capital account balance (including errors and omissions)	–54.4	23.6	–42.4	78.0	–66.0

Notes: The non-FDI capital account balance is the capital account balance minus net FDI plus net errors and omissions.

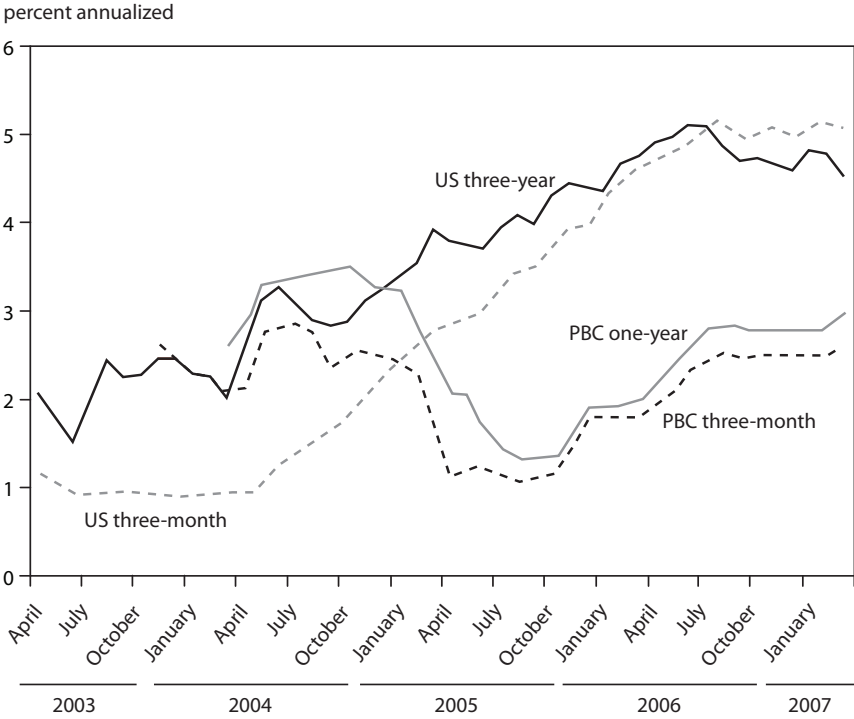
Sources: CEIC data; International Monetary Fund, *International Financial Statistics*; author's calculations.

than increase their lending, as corporate lending, for instance, carries a capital requirement of 100 percent, whereas no capital needs to be put aside for lending to the government. Thus there is a great deal of demand for PBC bills even at relatively low interest rates. This means that, at the margin, sterilization is essentially a moneymaking operation for the PBC, abstracting from the effects of changes in the exchange rate. Figure 2.4 shows how the present configuration of interest rates in China and the United States generates this profit from the PBC's sterilization operations.

However, such a cost-benefit calculation can be deceptive. The lack of exchange rate flexibility not only reduces monetary policy independence but also hampers banking-sector reforms. The PBC's inability to use interest rates as a primary tool of monetary policy implies that credit growth has to be controlled by blunter and nonmarket-oriented tools, including targets or ceilings for credit growth as well as so-called nonprudential administrative measures, which effectively amount to moral suasion. This vitiates the process of banking reform by keeping banks' lending growth under the administrative guidance of the PBC rather than letting it be guided by market signals. The constraint has also perpetuated large efficiency costs due to provision of cheap credit to inefficient state enterprises (Dollar and Wei 2007). The incidence of these and other costs of banking system inefficiency are not obvious, but depositors may ultimately bear the burden in the form of low or negative real returns on their saving.³

3. In July 2007, the benchmark one-year deposit rate was raised to 3.33 percent and the tax rate on bank interest income was cut from 20 to 5 percent. The effective after-tax deposit rate is now 3.16 percent, which is still below the current rate of consumer price index inflation.

Figure 2.4 PBC bill rates versus US treasury yields



Sources: CEIC data; People’s Bank of China (PBC); US Treasury.

The management of capital flows has been another crucial component of macroeconomic policy. Along with tax benefits and other incentives, extensive capital controls have been used to promote inward foreign direct investment while other forms of inflows, especially portfolio debt, have been discouraged (Prasad and Wei 2007). Capital controls have also been important in protecting the banking system from external competition by restricting the entry of foreign banks and making it harder to take capital out of the country. The limited development of debt and equity markets means that the state-owned banking system is effectively the only major game in town, for both borrowers and savers.

China’s approach to exchange rate policy and capital account liberalization may indicate a desire to maintain stability on the domestic and external fronts, and the large stock of foreign exchange reserves resulting from these policies may insure against vulnerabilities arising from a weak banking system. But the policy distortions needed to maintain this approach could generate imbalances, impose potentially large welfare costs, and become a source of instability themselves.

Path to Reforms

It is not easy to isolate specific policies to deal with the particular problems identified above. The reform process appears to have reached a stage at which the traditional approach of undertaking incremental reforms in isolation from others may not work well any more.⁴ Given the prominence of China's exchange rate regime in discussions about China-US bilateral relations as well as the issue of global current account imbalances, currency policy illustrates well the interconnectedness of various reforms.

What are the costs of an inflexible exchange rate? Figures 2.5a and 2.5b lay out some of the connections. The main point is that an inflexible exchange rate, while not the root cause of imbalances in the economy, requires a large set of distortionary policies to be maintained over long periods of time. Through multiple channels, these distortions hurt economic welfare and could, over time, shift the balance of risks in the economy. Flipping the argument around makes it easier to see why exchange rate flexibility matters for China. It is not necessarily because it will have a large or lasting direct impact on problems such as the US-China trade imbalance.⁵ Rather, the case for a flexible exchange rate rests on a deeper set of policy priorities, with the ultimate objective being balanced and sustainable growth in the longer term.

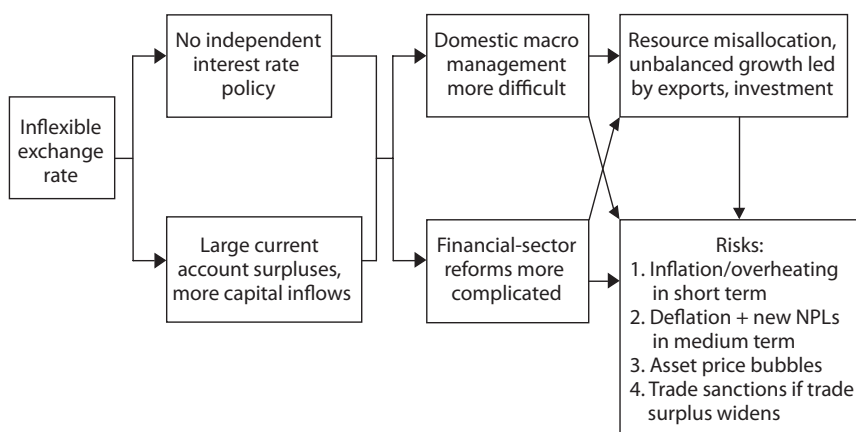
An independent interest rate policy is a key tool for improving domestic macroeconomic management and promoting stable growth and low inflation. Monetary policy independence is, however, a mirage if the central bank is mandated to attain an exchange rate objective. Capital controls insulate monetary policy to some extent, but they are notoriously leaky and tend to become increasingly less effective over time.⁶ Thus a flexible exchange rate is a prerequisite for an independent monetary policy. An independent interest rate policy is also a key input into financial sector reforms. Using interest rate policy rather than government directives to guide credit expansion is essential to encourage banks to become more robust financial institutions. Trying to foster the commercial orien-

4. See Blanchard and Giavazzi (2005) and Prasad and Rajan (2006) for more on this point.

5. While Chinese currency appreciation by itself may not affect global current account imbalances very much, it would be an important step toward resolving those imbalances, as other Asian economies may be emboldened to allow their currencies to appreciate if China made the first move.

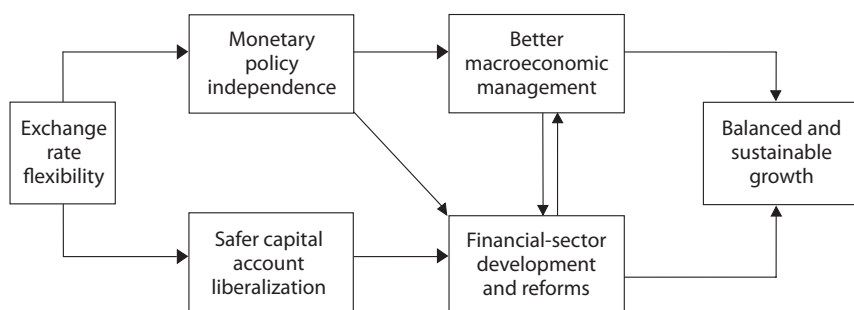
6. A crude way of measuring net flows through unofficial channels is to look at the errors and payments category of the balance of payments. Prasad and Wei (2007) document that during periods of downward (depreciation) pressures on the renminbi—e.g., the Asian crisis period—errors and omissions were negative and large, suggesting significant capital flight. From 2003 to 2005, the errors and omissions turned into large positive numbers, reflecting speculative inflows in anticipation of renminbi appreciation. Gross unofficial flows could, of course, be much larger.

Figure 2.5a Lack of exchange rate flexibility complicates macro policy and reforms



NPL = nonperforming loan

Figure 2.5b Making the right connections



tation of the banking sector without monetary policy tools to guide credit and money growth vitiates banking reforms.

The argument that the financial system needs to be fully modernized before allowing currency flexibility therefore has the problem backward. Durable banking reforms are likely to be stymied if the PBC’s ability to manage interest rates is constrained by the exchange rate objective. The PBC then has to revert to its old practice of telling state banks how much to lend and to whom, which hardly gives banks the right incentives to assess and price risk carefully in their loan portfolios. This makes banking reforms even more complicated than they already are.

Another requirement for broader financial development is a stable macroeconomic environment, for which—again—good macroeconomic

policies, including effective monetary policy, are necessary. A lack of effective macroeconomic management could generate risks through the financial sector: Without room for maneuver on interest rates, liquidity flows into the economy could result in asset price bubbles, including in the real estate and stock markets. These markets could thus become vulnerable to sudden and unpredictable shifts in investor sentiment that send them tumbling at the slightest provocation, with broader ripple effects throughout the economy.

Opening the capital account to inflows and outflows could also be an important catalyst to developing the domestic financial sector (Kose et al. 2006). Inflows can bring in technical expertise in developing new financial instruments, creating and managing risk assessment systems, and improving corporate governance. The approach of using foreign strategic investors to improve the efficiency of domestic banks is a strategy that Chinese authorities see as useful in their overall reform effort. Allowing outflows would help increase efficiency by creating competition for the domestic banking system and limiting the captive source of funds—bank deposits—that now keep domestic banks flush with liquidity. However, opening the capital account ahead of introducing greater flexibility in the exchange rate could pose serious problems in the future (see Eichengreen 2004; Prasad, Rumbaugh, and Wang 2005; and Yu 2007).

Ultimately, stable macroeconomic policies and a well-developed and efficient financial sector are crucial ingredients for balanced and sustainable growth. Exchange rate policy is clearly not an end in itself; rather, as figure 2.5b shows, it is important in achieving deeper policy reforms and improving growth and welfare.

An Alternative Monetary Policy Framework

Instead of a tightly managed exchange rate, what could be a suitable alternative anchor for inflation expectations? Marvin Goodfriend and I have argued that China should adopt an explicit inflation objective—a long-run range for the inflation rate and an acknowledgement that low inflation is the priority for monetary policy—as a new anchor for monetary policy (Goodfriend and Prasad 2007). An inflation objective, coupled with exchange rate flexibility, would best stabilize domestic demand in response to internal and external macroeconomic shocks. More broadly, focusing on inflation stability is the best way for monetary policy to achieve financial stability and high employment growth. Over time, the inflation objective would provide a basis for currency flexibility. In short, exchange rate reform is a key component of an overall reform strategy that is in China’s short- and long-term interests.

The time is right to make the switch, as economic growth is strong and headline inflation low. After the switch, the PBC could continue its current

approach to monetary policy at an operational level, including setting targets for money and credit growth. The crucial difference would be to switch the strategic focus from the exchange rate to inflation, meaning that the currency could appreciate or depreciate in response to more fundamental economic forces, such as productivity growth. This framework would subsume monitoring of monetary aggregates such as M2 and private credit, but directly targeting these aggregates is increasingly inappropriate for an economy such as China's, which is undergoing rapid structural transformation and changes in its financial markets. A full-fledged inflation targeting regime could be a useful long-term goal, but the approach I have outlined above is more practical for the foreseeable future and should deliver most of the benefits of formal inflation targeting.

Two related points are worth noting. First, an independent interest rate policy requires a flexible exchange rate, not a one-off revaluation or a sequence of revaluations. A flexible exchange rate buffers some of the effects of interest rate changes, especially in offsetting the temptation for capital to flow in or out in response to such changes. A one-off revaluation can solve this problem temporarily but could create even more problems subsequently if interest rate actions in a different direction become necessary, or if investor sentiment and the pressures for capital inflows or outflows shift. Second, exchange rate flexibility should not be confused with full opening of the capital account. An open capital account would allow the currency to float freely and be determined by the market. But the exchange rate can be made flexible and the objective of monetary policy independence achieved even if the capital account is not fully open.

Chinese policymakers often express concern that, given the fragility of the domestic banking system, exchange rate flexibility could be disastrous. There are two possible factors behind this concern. One is that sharp changes in the value of the currency could destroy bank balance sheets. There is little evidence, however, that Chinese banks have large exposures to foreign currency assets or external liabilities denominated in renminbi that would hurt their balance sheets greatly if the renminbi were to appreciate in the short run.

A more serious concern is that outflows of capital could starve the domestic banking system of liquidity by allowing domestic savers to take their money abroad. This is where the difference between exchange rate flexibility and capital account liberalization becomes especially important. With even the moderately effective capital controls in place now, there is no reason why China could not allow for greater exchange rate flexibility. Even if a flexible exchange rate does not yield a true market equilibrium rate because capital flows are constrained, it can allow for an independent monetary policy. Also, such flexibility does not by itself generate channels for evading controls on capital flows. In short, as a reason for not moving more quickly toward a flexible exchange rate, banking system weaknesses constitute a red herring.

Conclusion

China has achieved remarkable economic progress in the last three decades, but a great deal of work remains to be done to make the economy resilient to large shocks, ensure the sustainability of its growth, and translate this growth into corresponding improvements in the economic welfare of its citizens. Now is a good time to implement some of these essential reforms.

External pressure can help in the reform process, but only if it is placed in the right context. The debate in the United States about the Chinese exchange rate regime has been distorted in some ways and made political rather than substantive by placing it in the narrow context of the US-China trade balance. There is an important strategic and educational element related to reframing the exchange rate issue in a broader context. This is where external pressure from the international community can be helpful, not by threatening China with sanctions but by reorienting the discussion to focus on the linkages between currency reform and other core reforms on which there is broad consensus within China (Prasad 2007a, 2007b).

Working with China in a collaborative rather than confrontational manner could also help Chinese authorities develop deadlines for achieving specific policy goals. Such intermediate steps could be guideposts for the reform process and help to break down internal resistance to reforms. Commitments that China made in the context of accession to the World Trade Organization have helped to galvanize internal reforms. In China as in any other country, some groups stand to lose disproportionately from certain reforms, even if those reforms may be hugely beneficial overall. This is precisely where external pressure, applied judiciously, can help to generate enough momentum to support the forces that are predisposed to undertaking reforms. By contrast, a confrontational approach could well prove counterproductive, bolstering the forces opposed to reform and allowing them to paint certain changes as detrimental to China and in the interests only of other countries.

Ultimately, as far as Chinese reforms are concerned, there is a set of shared interests among policymakers in China, the United States, and elsewhere. Deep and enduring reforms that promote sustained and balanced growth in China are in the best interests of both China and the world economy.

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Comment

Some Bubbles in the Discussion of the Chinese Exchange Rate Policy

SHANG-JIN WEI

The word “renminbi” (RMB) was essentially unknown to most Americans before 2003, but a search of an electronic database (NewsPlus/Factiva) of all news articles in the four largest newspapers—*New York Times*, *Wall Street Journal*, *Washington Post*, and *USA Today*—reveals explosive growth in interest in the Chinese exchange rate in recent years. Between January 1, 1980 and December 31, 1982 only four articles in the four newspapers combined mentioned the renminbi, RMB, or Chinese yuan. From 1990 to 1992 only 19 articles mentioned them; ten years later, from 2000 to 2002, the count increased to 33 articles, still a relatively low number. Between January 1, 2005 and October 18, 2007, however, no less than 231 articles mentioned the words. If the count of the news articles were an asset price, such a rapid rise could have sparked suspicion of bubbles. I would like to comment on some possible bubbles in the discussion of China’s exchange rate policy.

Eswar Prasad has stressed the benefits of a move to a more flexible exchange rate for China in improving its macroeconomic management. Others have advocated the benefits of a more flexible Chinese renminbi in alleviating global imbalances. I would like to suggest that both benefits have been oversold a bit in policy circles. First, the role of a flexible exchange rate regime in facilitating current account adjustment may be

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vastly exaggerated. Second, the virtue of a flexible renminbi exchange rate regime in enhancing the effectiveness of China's macroeconomic stability may also be overrated.

Would a Flexible Exchange Rate Really Speed Up Current Account Adjustment?

The above question is relevant not only because a country's current account imbalance is the difference between its national savings and national investment, the large US current account deficit reflects its large saving deficit, and the US bilateral deficit with China is only part of its overall deficit with the rest of the world. All these are true. Beyond them, many economists and policy wonks take it as self-evident that a flexible exchange rate regime must deliver a faster current account adjustment. Many International Monetary Fund (IMF) statements also reflect this supposition. However, no systematic evidence supports it. I have taken to calling it a faith-based initiative, widely assumed to be true and actively peddled to countries as policy advice but with little solid supportive evidence.

In a systematic analysis of the issue, Menzie Chinn and I find absolutely no support in the data for the notion that countries on a *de facto* flexible exchange rate regime exhibit faster convergence of their current account to a long-run equilibrium (Chinn and Wei 2007). The finding holds when we control for trade and financial openness and when we separate large from small countries. The current account does tend to revert to its long-run steady state, as is clearly reflected in our empirical work. However, the speed of adjustment is not systematically related to the degree of flexibility of a country's nominal exchange rate regime.

Should we be surprised by this finding? Perhaps not. The current account responds to the real exchange rate, not the nominal exchange rate. If the real exchange rate adjustment does not depend very much on the nominal exchange rate regime, then neither does current account adjustment. Chinn and I therefore check whether the nature of a country's nominal exchange rate regime significantly affects the adjustment process of its real exchange rate. After looking at enough regressions, we conclude that the answer is no: Real exchange rate adjustment is not systematically related to how flexible a country's nominal exchange rate regime is. If anything, there is slight but not very robust evidence that less flexible nominal exchange rate regimes sometimes exhibit faster real exchange rate adjustment.

Just to be clear, if one could engineer a real appreciation of the renminbi, it could affect China's trade or current account balance. In a separate research project that I am conducting with Caroline Freund and Chang Hong, using China's bilateral trade data and separating processing

from nonprocessing trade, we find evidence that bilateral trade volume clearly responds to changes in the level of bilateral real exchange rate, especially for nonprocessing trade (Freund, Hong, and Wei 2007). But a more flexible exchange rate does not promise a faster current account adjustment or resolution of global current account imbalances.

If China were to opt for a more flexible exchange rate regime today, its real exchange rate would most likely appreciate on impact. However, given China's still shaky financial sector and the credit crunch in advanced economies, it is certainly possible that the real exchange rate would depreciate the day after tomorrow. It is useful to recall that today's expectation of renminbi undervaluation is a relatively recent phenomenon, emerging in late 2003. As figure 2.C1 clearly shows, until October 2003, the market actually expected a renminbi depreciation, as measured by the nondeliverable forward rate (Frankel and Wei 2007). But the expectation shifted in late 2003 when US officialdom and scholars at prominent think tanks started to raise the volume of their calls for a renminbi revaluation.

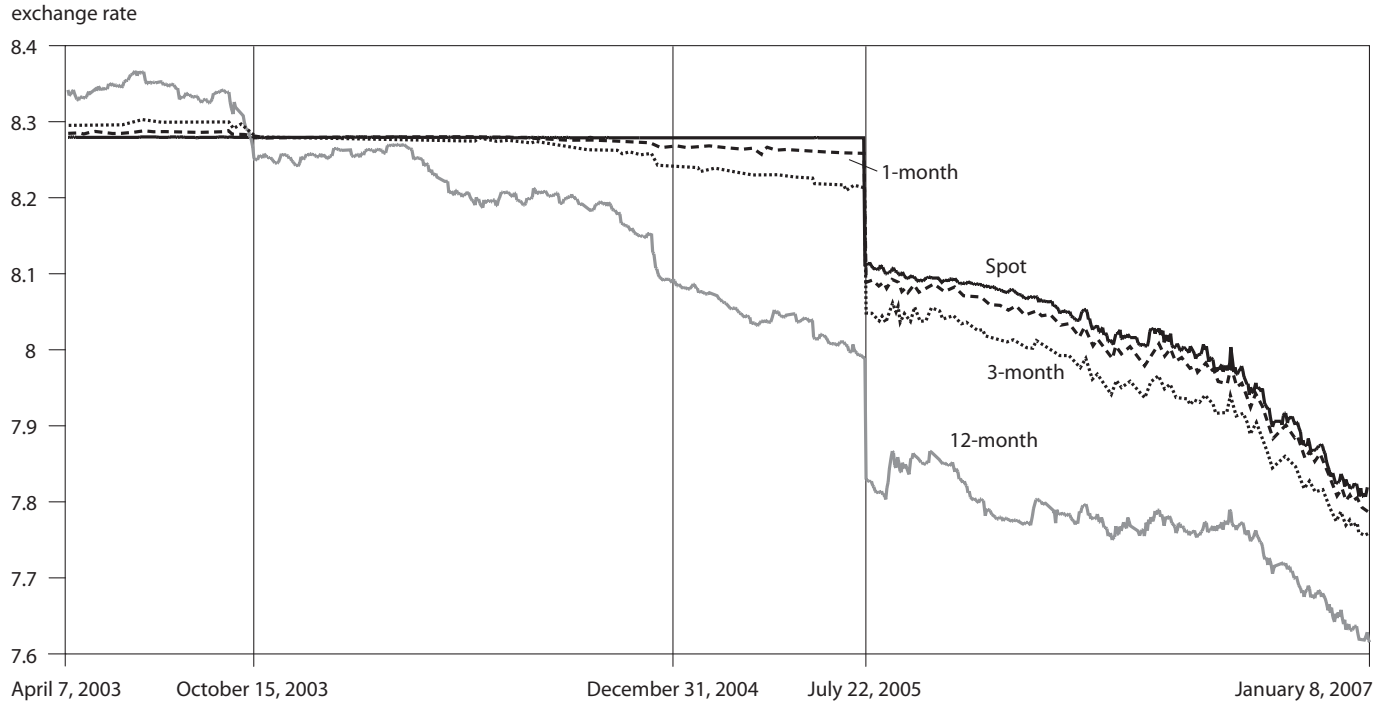
The very high speed of China's foreign reserve accumulation really took off within the last four years, as figure 2.C2 shows. It may very well be responding to a shift in market expectations of renminbi movement, or at least the reserve accumulation and the exchange rate speculation feed on each other. However, if it took only four years for China's foreign exchange reserve to triple in value, it may take only another four years for it to lose 60 percent of its value once the exchange rate expectation starts to reverse itself. Economic history books are full of examples of seemingly sudden shifts in market sentiment. A tight credit market in developed countries, such as the one we are seeing today, has in the past engendered a reversal of global capital flows and a concomitant shift in the valuation of emerging market currencies.

Would a Flexible Regime Vastly Improve the Effectiveness of China's Macro Policies?

To appeal to China's self-interest, advocates of a more flexible exchange rate regime say it will greatly enhance the effectiveness of China's domestic macroeconomic policy. As the logic goes, a more flexible regime would free the domestic interest rate to be an instrument for domestic macroeconomic stability and may benefit other policy objectives as well, such as financial reform and addressing future shocks. I agree that a shift to a more flexible exchange rate regime is a net positive for China, but I would caution that the benefits of doing so for China should not be overrated.

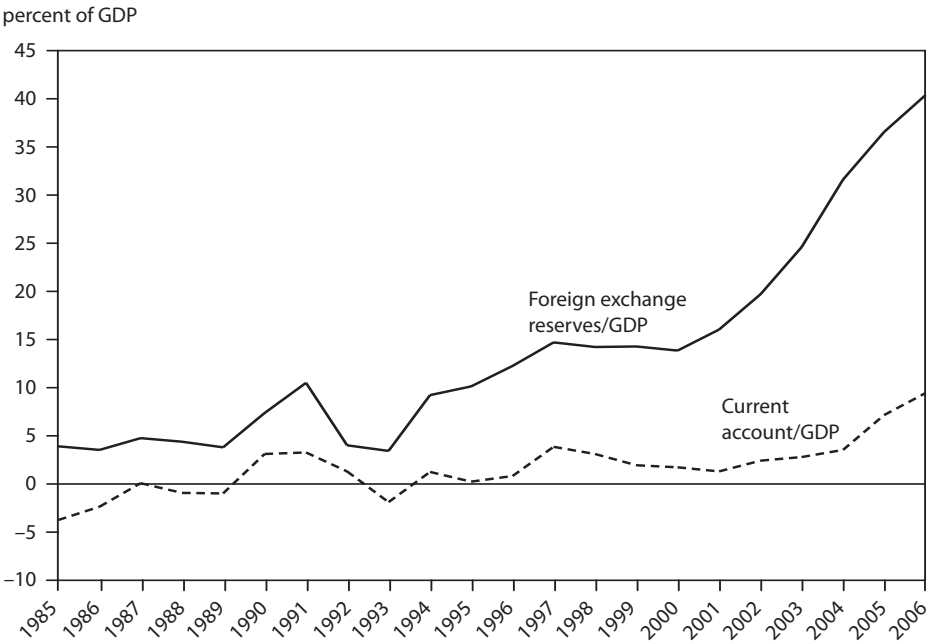
First, China's current monetary policy still has room for maneuver. Fundamentally, China's capital controls, while leaky, are binding at the

96 **Figure 2.C1 Spot and forward rates of renminbi-US dollar, 2003–07**



Source: Author's calculations based on the International Monetary Fund, *International Financial Statistics* and *World Economic Outlook* databases.

Figure 2.C2 China's current account and foreign exchange reserves, 1985–2006



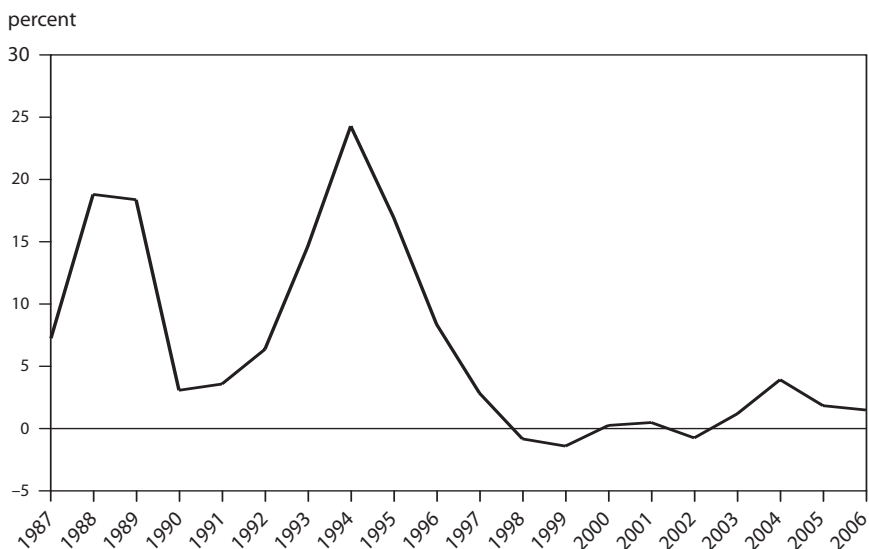
Source: Author's calculations based on the International Monetary Fund, *International Financial Statistics* and *World Economic Outlook* databases.

margin. The gap between lending and deposit rates can be widened and the required reserve ratio might also be raised if desired.

Second, China's fiscal policy also has room for maneuver. Many contingent liabilities should and may show up on the country's balance sheet, but state-owned firms collectively are making a profit that the government budget currently does not count. The state may require the firms to pay up more dividends to augment existing fiscal management tools. This provides a cushion for the use of the fiscal policy in managing macro economy.

Third, to the extent that the de facto dollar peg constrains the conduct of China's monetary policy, it may not be a bad policy. The most important goal of a good monetary policy is to maintain price stability. Beyond its role in promoting exports, the de facto peg to the US dollar has served China well as an anchor for the country's monetary policy. Once China switches to a substantially more flexible exchange rate regime, it will by definition lose this nominal anchor. One might prescribe an inflation-targeting framework, but one could question how faithfully China would follow such a framework.

Figure 2.C3 China's consumer price inflation, 1987–2006



Source: Author's calculations based on the International Monetary Fund, *International Financial Statistics* and *World Economic Outlook* databases.

China's recent monetary history has clear bouts of double-digit inflation, as figure 2.C3 shows. Thus resisting political pressure to deviate from maintaining price stability is not necessarily a strong suit for the central bank. The current leadership at the central bank, Governor Zhou Xiaochuan and his deputies, happens to be superb. But leadership at the central bank could change (and there were indeed speculations of this kind recently), and a look at the recent history does not inspire absolute confidence that an inflation-targeting framework would be faithfully followed. A less stable domestic price is a risk that cannot easily be ruled out if and when the country shifts to a more flexible exchange rate regime.

Conclusion

I have stressed two points. First, empirical evidence does not support the notion that a flexible exchange rate regime would facilitate a faster current account adjustment. Second, the virtue of a flexible exchange rate regime in enhancing the effectiveness of China's macroeconomic policy may also be overrated.

I still think that the benefits of moving to a more flexible exchange rate regime likely outweigh the costs for China. However, China faces many

challenges in its economy, including environmental degradation, rising income inequality, pervasive corruption, mining production safety, food production safety, and a constant threat of massive unemployment. In the grand scheme of things, in ranking the importance of all the reforms on the basis of a cost-to-benefit ratio, how much priority this particular reform—the shift of the exchange rate regime—should be given is a separate question.

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Comment

The Open Economy Trilemma: An Alternative View from China's Perspective

JIN ZHONGXIA

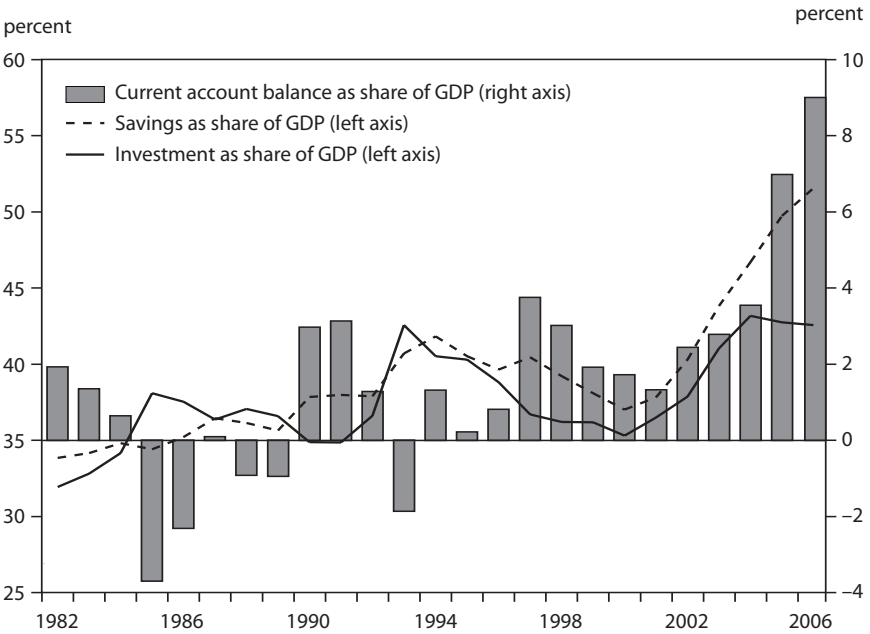
In my comments on Eswar Prasad's contribution to this volume, which covers issues that are important to both China and its major trading partners, I would like to begin with three observations. First, nobody is more concerned about the current imbalance than the Chinese authorities themselves. The government has placed the adjustment of imbalance at the highest priority this year. The difficulty is not in deciding whether the imbalance needs to be adjusted; it is in finding the best policy combination to accomplish it. Second, the degree of openness in China's capital account has been increasing over time, and as a result, the trade-off between exchange rate stability and the effectiveness of monetary policy may have become more relevant. Third, the renminbi's exchange rate in general has become more flexible in the past two years, and thus, there is more room for China's central bank to implement monetary policy more effectively.

Unanswered Questions

The so-called open economy trilemma (see Obstfeld and Taylor 1998), entailing the difficult decisions authorities make in determining exchange

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Figure 2.C4 China's structural saving-investment imbalance, 1982–2006
(percent in current prices)



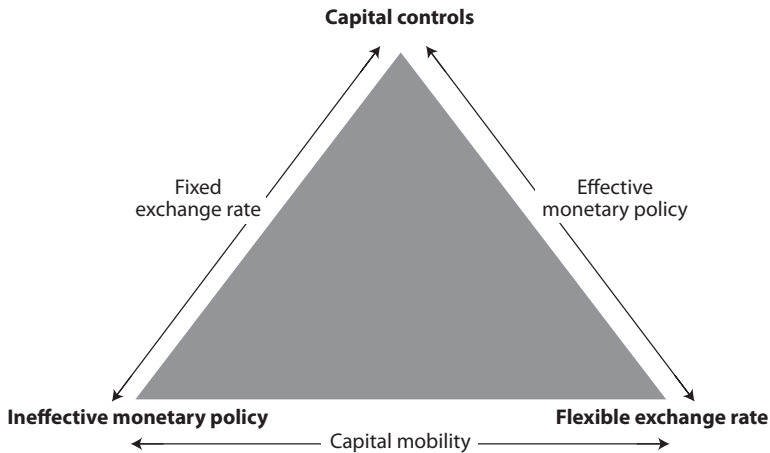
Source: National Statistics Bureau of China.

rate regimes, levels of capital mobility, and monetary policy effectiveness, is a useful analytical framework in general. However, some critical questions have not been answered—in particular, how effective the exchange rate policy could be in an economy with a structural imbalance between savings and investment. Figure 2.C4 shows the development in China's savings-investment imbalance in recent years. The corner solution implied by the trilemma (see figure 2.C5) is a theoretical answer (Yi and Tang 2001), but in reality, noncorner solutions could be more practical, especially for a developing country such as China (Jin 2007).

Exchange Rate: Stability Versus Flexibility

First, it is a demanding process to search for the appropriate degree of exchange rate flexibility or strike a balance between flexibility and stability. A number of factors must be considered. How flexible is flexible? What policy package can best adjust an imbalance? If the imbalance has not been significantly reduced in the short term, is it because the exchange rate is not flexible enough? Have the underlying structural issues been

Figure 2.C5 Open economy trilemma



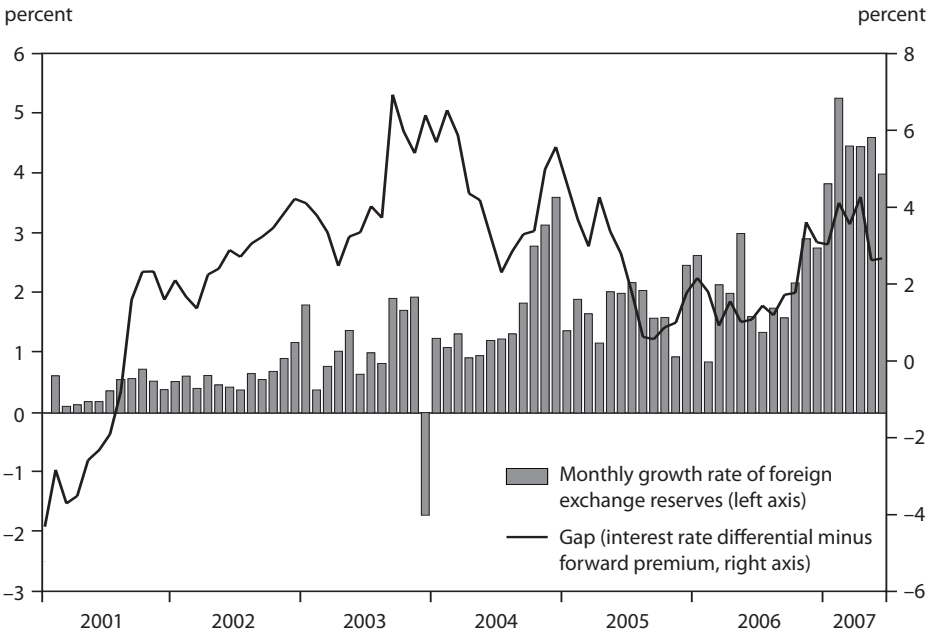
tackled with sufficient strength, or is the continued imbalance simply due to a time lag of the adopted policies?

Second, the actual currency regime in most economies lies between a fix and a free float (Reinhart and Rogoff 2002). The Fed has intervened in the foreign exchange market many times, in the late 1970s, 1980s, 1990s, and 2000. Even without direct intervention, the US dollar's exchange rate is not free from the effect of government intervention. The dollar has been subject to a strong influence of the federal funds rate, which in turn has been influenced heavily by monetary authorities aiming to achieve macroeconomic stability. Fortunately, nobody complains that the interest rate has been manipulated. Likewise, the International Monetary Fund (IMF) also gives its members the right to choose the currency regimes needed to achieve economic stability.

Monetary Policy Effectiveness: Beyond Currency Regime

The effectiveness of monetary policy is constrained by factors beyond currency regime. In China, the uncertainties in monetary transmission mechanisms, the rapid development of financial markets, and the technical difficulty in making the price index more reliable could affect the effectiveness of monetary policy. In addition, according to the Goldman Sachs Financial Conditions Index, though the Federal Reserve has tightened its policy stance by cumulatively raising the federal funds rate by 425 basis points between 2004 and 2007, real financial conditions have shown little sign of tightening if judged by higher stock prices, smaller term pre-

Figure 2.C6 Correlation between gap derived from interest rate parity and growth in foreign exchange reserves, 2001–07



Sources: Bloomberg; People’s Bank of China; author’s calculations.

miums, and lower credit spreads (Hatzius 2007). Even when an economy chooses a very flexible currency regime, its monetary policy may not be as effective as expected.

Capital Account: Capital Mobility Is Increasing, but Management Matters

Capital mobility is increasing in China, but capital account management in both China and its major trading partners can greatly affect the exchange rate formation mechanism. On one hand, capital flow in China has become increasingly sensitive to changes in economic fundamentals. To illustrate, we can use an arbitrage indicator GAP (extent of deviation from interest rate parity) derived from interest rate parity, expecting that a rise or fall in the GAP leads to capital inflows or outflows and therefore changes in foreign exchange reserves. Figure 2.C6 shows that in China, since mid-2001, the correlation between the GAP and the growth rate of foreign exchange reserves has been quite obvious in many periods.

On the other hand, reforms of capital account management in China and the removal of investment protectionism abroad will help reduce the pressure of imbalance and potential excessive exchange rate fluctuation. Until very recently, China's foreign exchange management system had been biased toward encouraging capital inflow rather than outflow, which may have significantly exaggerated the renminbi's appreciation pressure. The recent surprise performance in the sale of a number of overseas portfolio investment funds under China's Qualified Domestic Institutional Investor (QDII) program has revealed great motivation in making overseas portfolio investments in household sector. In all cases, the subscription greatly exceeded the original quota in a single day. Without a more symmetric opening up of the capital account, it is unrealistic to estimate the equilibrium level of China's exchange rate.

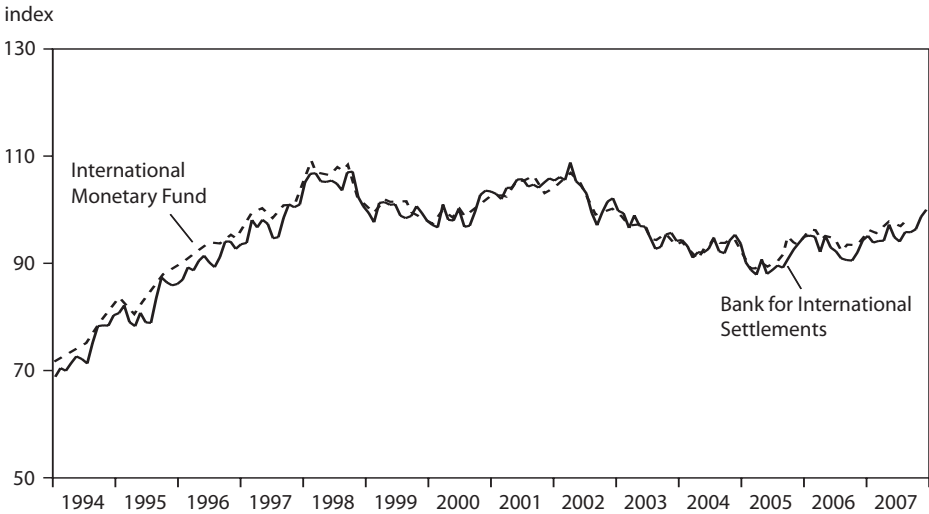
Also, in spite of progress in financial globalization, restrictions in many countries on capital inflow and the lack of experience in overseas investment in China of both institutional and individual investors have been invisible obstacles to a market-based recycling of surplus. In developed countries, concerns about national security, sector monopoly, and interest groups could make many kinds of capital movement difficult. Both domestic and international factors have impeded the potential market-based recycling of surplus and could also have exaggerated the renminbi's appreciation pressure.

Two Additional Comments

First, the discussion of the open economy trilemma needs to include the trade-off between exchange rate flexibility and the effectiveness of fiscal or structural policy. In the case of perfect capital mobility, the trilemma shrinks to a dilemma, the Mundell-Fleming model (Mundell 1963, Fleming 1962), in which monetary policy is more effective under a flexible currency regime and fiscal policy is more effective under a stable currency regime. Therefore, there is also a trade-off between exchange rate flexibility and fiscal policy effectiveness. Given the structural nature of the imbalance in China, it is wise for the government to adopt various fiscal and structural measures to correct distortions. The more complete the structural reform is, the more effective the exchange rate adjustment will be, and the less demand there will be for excessive exchange rate movement. However, it may take time for the structural reform to become effective.

Second, and as a cautionary note, the real appreciation of the renminbi has been underestimated. IMF and Bank for International Settlements (BIS) statistics show that China's real effective exchange rate (REER) has been appreciating since early 2005 (see figure 2.C7). However, these REERs

Figure 2.C7 Renminbi real effective exchange rate, 1994–2007
(2000 = 100)



Note: Real (consumer price index–based), broad indices, monthly averages.

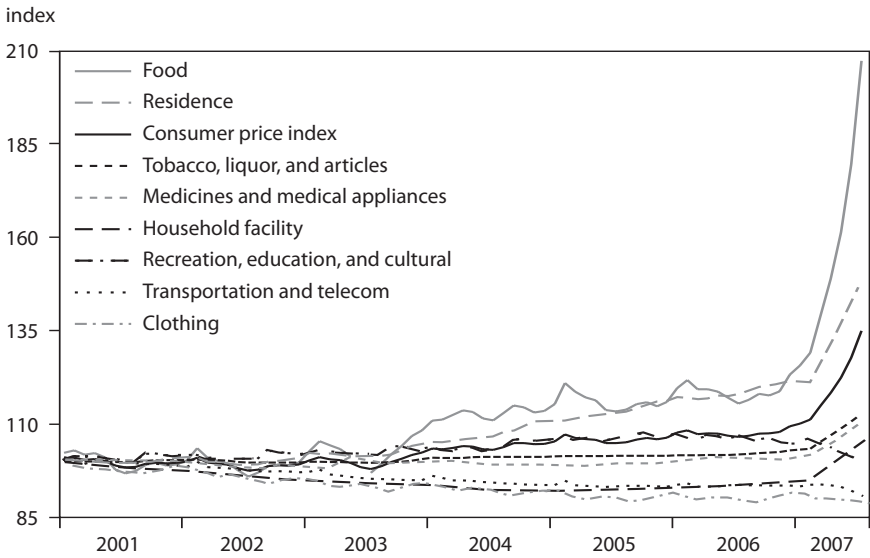
Sources: Bank for International Settlements; International Monetary Fund.

may have underestimated the renminbi’s real appreciation due to their inability to measure accurately the price of tradable versus nontradable goods (Wickham 1993). They use a wholesale price index, producer price index, or sometimes a consumer price index (CPI) for tradable goods and a CPI for nontradable goods. As the CPI for China has a large portion of tradable goods, the resulting REER is more like a ratio of two general price levels between the home country and its major trading partners.

Figure 2.C8 decomposes China’s CPI and shows their development since the end of 2000. Clearly, the prices of those typical nontradable goods, such as food and residence, have been rising remarkably, whereas the prices of typical tradable goods, such as clothing, transportation, and telecommunications, have been declining steadily. These diverging trends have become more significant since the end of 2003 and even more so since the beginning of this year.

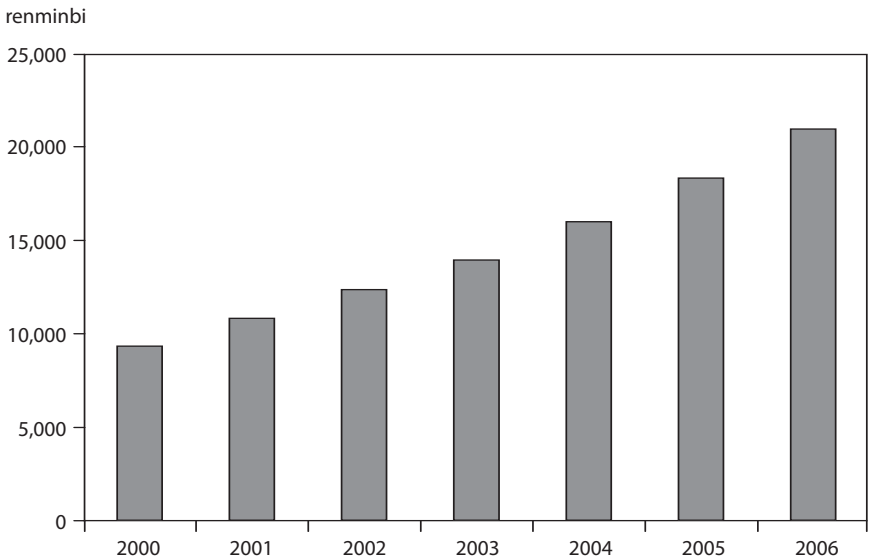
Figure 2.C9 also shows a rapid increase in urban wage levels in recent years. All of the trends clearly indicate that the renminbi’s real appreciation has been much more significant than conventional measurements suggested. The crucial implication is that there is no way for Chinese authorities to create a competitive advantage by choosing a specific currency regime, and they have no intention of doing so.

Figure 2.C8 Decomposition of China's consumer price index, 2001–07
(December 2000 = 100)



Source: CEIC data.

Figure 2.C9 Average annual urban wage in China, 2000–2006



Source: National Statistics Bureau of China.

Conclusion

A practical policy package that follows a noncorner solution to the open economy trilemma may have a higher chance of being successful. Measures may include

- a reasonably flexible exchange rate, which may make a monetary policy more effective;
- a more active and well-targeted fiscal policy, which will help to reduce distortion in the taxation system unduly biased toward the tradable sector, absorb excess liquidity, and allow more active spending on infrastructure, social security, and environmental protection;
- a deepening of financial reform, which could channel savings into investment, including overseas investment, more efficiently;
- a more symmetric capital account management and rapid build-up of expertise in overseas investment (through international cooperation if necessary), which could facilitate surplus recycling into the international financial market; and
- a constructive international environment, including a trustworthy IMF not unduly influenced by parties with stakes in multilateral disputes. Such an environment can better understand the noncorner solution of the imbalance and facilitate the adoption of a package of policies rather than advocating a single tool; this will help to achieve a win-win solution for both China and its economic partners.

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