

## Monetary Management of Transition in China: Balancing Short-Run Risks and Long-Run Optimality

Markus Diehl and Rainer Schweickert

- Expecting an appreciation of the Chinese currency seems to be a safe bet. There is a mounting pressure from U.S. representatives, and a majority of economists seem to believe that the Chinese economy is overheating and that the dollar peg should be loosened as soon as possible.
  - Indeed, a nominal appreciation *may* help reduce reserve inflows and allow for a more autonomous monetary policy in the case of overheating. A plausible strategy would be a small one-step revaluation, which would bring the renminbi to parity with the Hong Kong dollar. However, such an adjustment may provoke additional speculative capital inflows and is not even necessary to bring about the real appreciation. Overheating should lead to an increase in domestic inflation rates above the U.S. level, which—given the fixed nominal exchange rate—delivers the real appreciation.
  - There are certain signs that the Chinese economy is not characterized by overheating but rather by overinvestment. Indications for overinvestment are the strong expansion of investment above 40 percent of GDP, the increase in real estate prices in high-growth regions, and the lack of a strong increase in consumer prices. In that case, the present restrictive policy mix of the Chinese authorities is preserving the situation of excess supply and undervaluation. A nominal appreciation would even increase the internal imbalance, as claimed by Chinese authorities.
  - Whereas the diagnosis is controversial with respect to overheating versus overinvestment, undervaluation can be taken as a stylized fact.
- Hence, short-run adjustment could be achieved by less restrictive monetary and fiscal policies conditional on the development of the consumer price inflation which should be allowed to show a positive differential versus the U.S. consumer price inflation.
- Apart from such short-run consideration, the more general question is how to sequence the shift to a flexible exchange rate regime, which seems to be adequate for a large country like China. On the one hand, it is plausible that China should learn to float while the capital account is relatively closed. On the other hand, both opening up the capital account and introducing exchange rate flexibility need a certain degree of capital market development. Additionally, one-side bets on the direction of exchange rate movements when giving up a peg should be avoided. Both preconditions are currently not given in the case of China.
  - The priorities for balancing short-run adjustment and long-run optimality are (1) a real appreciation via higher consumer price inflation and (2) speeding up domestic capital market reform as long as capital controls are effective to some extent. This should allow phasing in an augmented inflation targeting regime and avoiding a hard landing, which otherwise may be the consequence of lifting a solid exchange rate anchor in stormy waters.

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## 1 Introduction

In spring 2005, expecting a change in China's exchange rate policy seems to be a safe bet. The consensus of economists both in public sector institutes and private sector research departments is surprisingly wide in this respect, and financial markets are consistently pricing in a small appreciation within the next twelve months. In fact, the latter was already the case in mid-2003 and mid-2004, but in the past few months speculation has been fueled by incremental reforms and—relatively vague—statements by the Chinese government.

The stage for a change in the 10-year-old dollar peg of the Chinese currency (renminbi) has been set by mounting pressure from U.S. representatives—mainly single members of Congress, but to some extent also of the administration—and a series of speeches and reports with international audience, ranging from the October 2003 meeting of the G7 finance ministers over the October 2004 meeting of G7 finance ministers, the first one with official Chinese guests, to the speech of the vice-governor of the Chinese central bank (PBC) at the 2005 spring meeting of IMF and World Bank. Although these actors played the same tune—a change in China's exchange rate policy—they used different keys:

- The communiqués of the G7 finance ministers emphasized the role of flexible exchange rates in general to promote the adjustment processes on global financial markets. Although the statements did not contain an explicit reference to China, they were clearly understood as such.
- By contrast, U.S. officials addressed the need for an appreciation of the renminbi against the U.S. dollar, based on the perception that the high and increasing bilateral trade deficit with China is due to an undervalued and therefore unfair exchange rate. The recent Report on International and Exchange Rate Policies of the U.S. Treasury (May 2005) stopped short of such accusations. However, a Congress resolution already threatens to impose trade restrictions in case of not appreciating within six months.

- The Chinese government has indicated that it would gradually move to a market-based exchange rate policy but only conditional on further reforms of the banking system and capital account liberalization. At the same time, it has made clear that these steps are not the result of external pressure but due to the domestic economic situation.

In a widely noted Reuters interview in late April 2005, China's central bank governor said that there were “no serious political or technical obstacles” to reform the exchange rate regime, but at the same time noted that “we have our own sequencing considerations.” As examples of other reforms to be carried out, he mentioned financial sector reforms, gradual capital account liberalization, and foreign exchange market mechanisms. This new tune should not be interpreted as a concession to the aggressive unilateralism of the U.S. administration but as a gradual adaptation to the economic needs of a successful emerging market economy.

In this paper, we will not discuss the political economy of the world currency regime and the adjustment needs related to the U.S. twin deficits. The aggressive unilateralism of the U.S. government in currency matters has a long tradition—Japan in the 1970s, South Korea and Taiwan in the 1980s have been prominent victims—and in various periods this has been accompanied by a benign neglect of adjustment needs internal to the United States. Instead, we will focus on the adjustment process from the Chinese viewpoint. In this respect, we will present a contrarian view to several—seemingly far-fetched but rarely answered—questions. Firstly, in our view the Chinese economy is not overheating in the classical sense. Secondly, the upward pressure that is presently experienced by the renminbi is largely due to speculative capital inflows to China, bearing signs of a self-fulfilling prophecy, and capital account controls in China. Thirdly, even if one agrees with the view that the renminbi is undervalued, the adjustment could be realized without a large nominal revaluation of the currency and at the same time with lower adjustment costs for the Chinese economy.

## 2 Is the Chinese Economy Overheating?<sup>1</sup>

Commonly, an economy is characterized to be in a situation of overheating if (1) there is a sustained excess of aggregate demand, and (2) in consequence, domestic consumer price inflation accelerates. In this respect, the Chinese economy can hardly be called “overheating” in 2004/2005, in contrast to some phases in the recent past, as the next paragraph shows. This is not to say, however, that there is nothing in the current situation that deserves the attention of policy makers. We will argue that it is the rampant growth of domestic investment rather than the high GDP growth rates per se that gives rise for pessimistic scenarios, and that such scenarios are even more alarming, since a “hard landing” would have long-lasting, deflationary consequences for production and financial markets.

Since the beginning of economic reforms in 1978, China’s GDP has increased by an average 9 percent per year.<sup>2</sup> Such a pace is not unusual for a newly industrializing country. Japan and the four “little tigers” (South Korea, Taiwan, Hong Kong, and Singapore) achieved similar rates for over two decades starting in the mid-fifties and mid-sixties, respectively (IMF 2004b). Against this background, China’s economic growth—we expect GDP to grow by at least

8.5 percent this year, compared to 9.5 percent last year—is not unusual. In addition, there can hardly be any talk of excess demand, as there would have to be capacity bottlenecks which would be reflected in a strong increase in prices.<sup>3</sup> However, consumer prices decreased during 2001–2003, whereas the recent acceleration up to rates of 5 percent in late 2004 was mainly due to a surge of food prices—caused by a combination of poor harvests and the diversion of agricultural land to industrial uses. It should not be overlooked that there have been at least two such phases of “classical overheating” in the past: in 1987/88 and in 1992–1994. During these phases, consumer prices increased at average annual rates of almost 20 percent and GDP grew by over 10 percent (Figure 1). In the ensuing years (1989 and 1995), the countermeasures taken by the Chinese government were clearly effective in the form of a noticeable slowdown in growth and inflation. By contrast, the rate of inflation stood at only 5 percent in summer 2004 and has declined since. Moreover, the acceleration seen in 2004 was mostly due to an increase in the prices of food and imported raw materials. According to press reports, there seem to have been occasional electric power supply bottlenecks during 2004, but apparently this has not prevented industrial output from growing at two-digit rates. Our presumption is that energy shortages affected private households rather than industry. In addition, public investment in utilities has been large in the recent past.

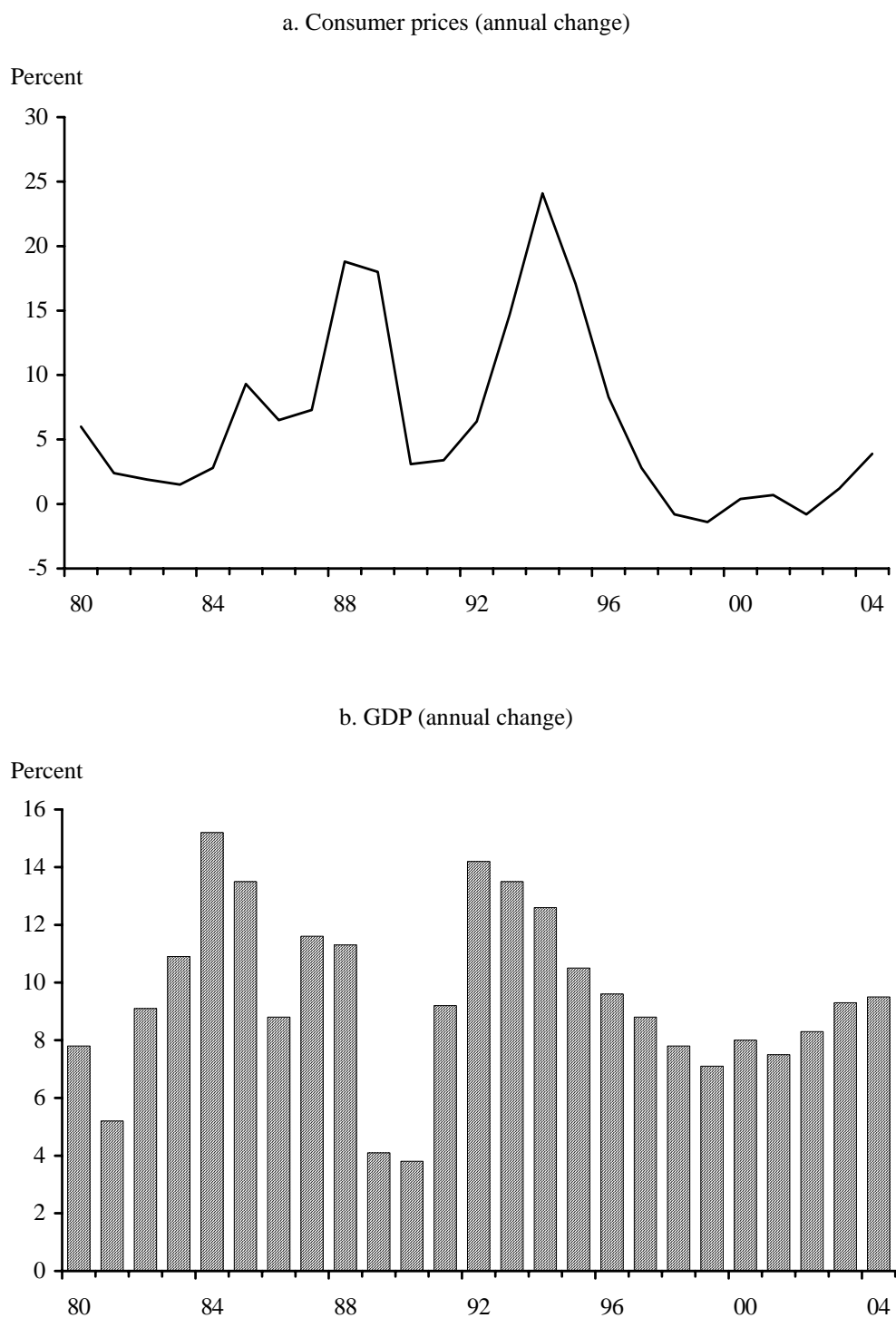
One thing is reminiscent of earlier phases of overheating in China, though: similar to 1992–1994, the share of gross domestic fixed investment in GDP increased strongly to over 40 percent in the past three years (Figure 2). Generally, nothing speaks against a high investment ratio, as this means that new infrastructure and production capacities are being created and the housing supply is being improved. Unlike many other developing countries, China largely finances these

<sup>1</sup> This section builds on Diehl (2005). The views presented in this paper, however, are those of the authors and not necessarily those of the economics department of WestLB AG.

<sup>2</sup> Chinese statistics should be digested with a grain of salt (Simpfendorfer 2004a, 2004b). Although the broad outline of official statistics resembles those in other emerging market economies, it is hardly possible to give a full and consistent picture of the state of the economy. First, national accounts are only available at current prices, except for headline GDP growth. Second, the expenditure side of national accounts seems to be less reliable than the production side, due to a legacy of China’s command economy. In particular, aggregate private consumption is said to be underreported and fixed investment overestimated. Third, it is almost impossible to reconcile data from various reports, be it data for provinces with national data or national accounts data with production and sales statistics. Fourth, data revisions are attributed solely to the figures for the final period of a publication schedule (i.e., December for monthly data, 4th quarter for quarterly data) rather than being allocated to the respective earlier periods.

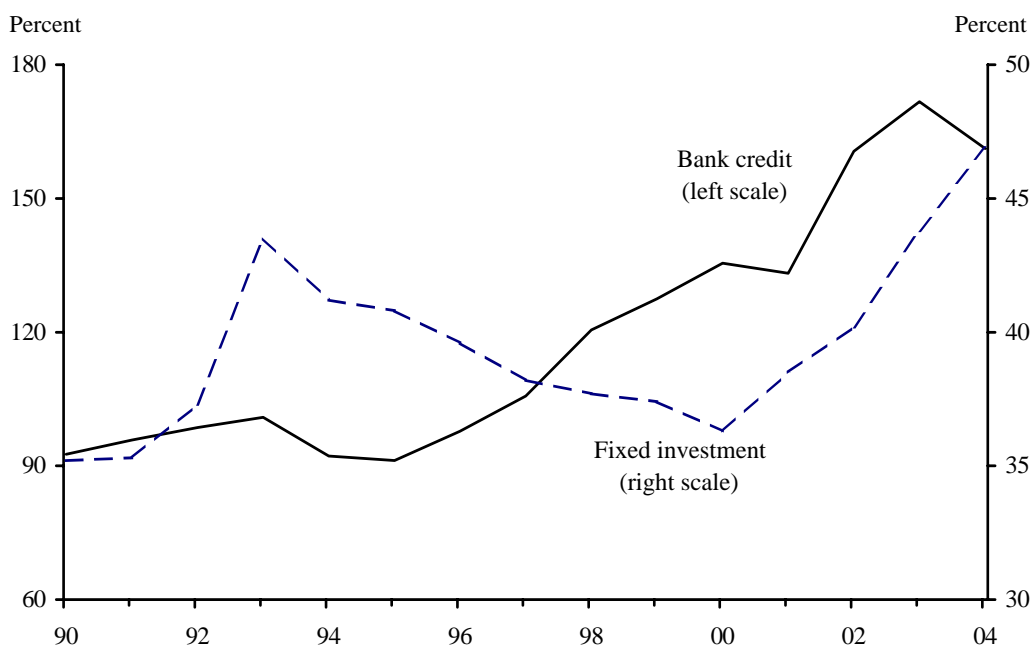
<sup>3</sup> Just like in some industrial countries, asset price inflation may be the reason for the lack of consumer price inflation (Ng 2004; Xie 2004). Indeed, property prices are reported to increase at rates between 10 and 20 percent. By contrast, stock market prices are declining, presumably as a consequence of the disaster of some prominent stock values.

*Figure 1:*  
Consumer Prices and Real GDP, 1980–2004



Source: National Bureau of Statistics of China via ECOWIN (April 2005).

Figure 2:  
Fixed Investment<sup>a</sup> and Bank Credit as Percentage of GDP, 1990–2004



<sup>a</sup>Estimate for 2004.

Source: National Bureau of Statistics of China via ECOWIN (April 2005).

investments with domestic savings,<sup>4</sup> which means that the debt service burden for foreign loans is relatively low. In consequence, there is no reason for China to fear a balance of payments crisis in the case of suddenly shifting investors' sentiments, since the external vulnerability of China is negligible, unlike the Southeast Asian economies in the mid-1990s. For the last five years, the current account remained in surplus in spite of the surge in imports of raw materials, intermediate inputs, and capital goods. The external indebtedness is low by all standards—both in relation to export revenues and to currency reserves (Figure 3). In particular, official reserves exceed total external debt.

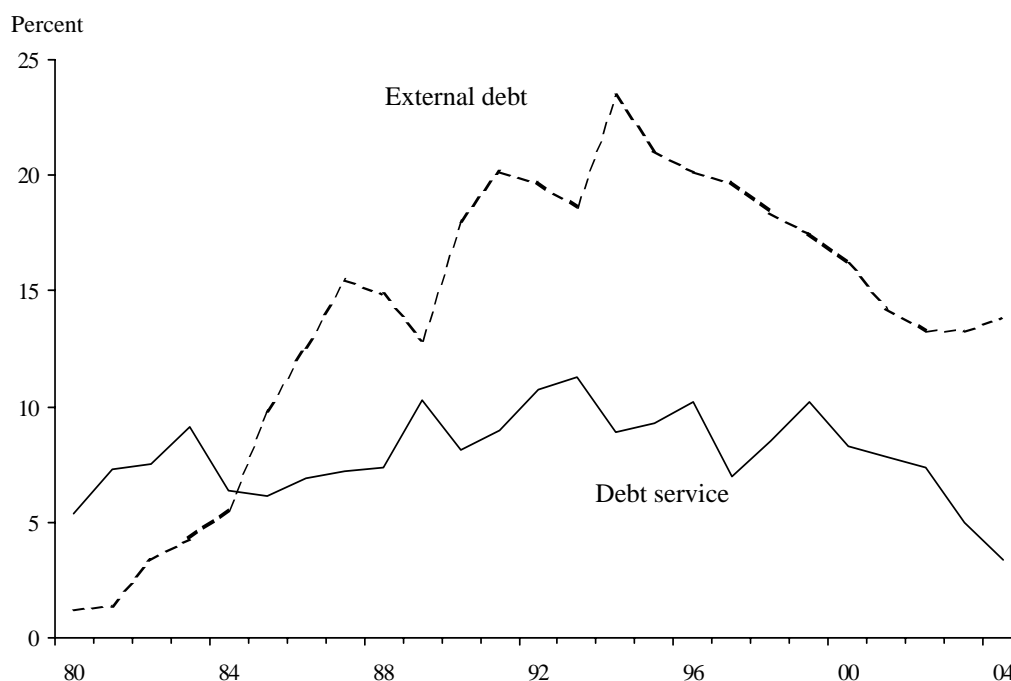
However, it is to be feared that the strong acceleration in capital spending means that not all projects that have been realized will actually be successful. Once economic activity begins to

weaken, it may turn out that too many new capacities have been created in some industries and that there is an oversupply of real estate.<sup>5</sup> This would cause a slump in capital spending, while the banking sector would have to cope with an increase in nonperforming loans. The credit boom seen in recent years—bank loans as a percentage of GDP have almost doubled in the past ten years (Figure 2)—suggests that banks took considerable risks when granting loans during this period. In fact, the high share of nonperforming loans—16 percent of the state banks' credit volume by the end of 2004, according to official reports (CBRC 2005)—is already a great burden. This is the result of the inefficient functioning of the financial markets in the past. Loans often had to be granted as desired by the party or government bureaucracy. While the Chinese government has already taken first steps to consolidate the financial sector (Barnett

<sup>4</sup> In value terms, FDI accounts for only 10 percent of gross fixed investments, but it probably acts as a catalyst in the creation of export-oriented production capacities. So-called "foreign-funded" enterprises account for one-third of industrial production and one-half of exports.

<sup>5</sup> Investment in real estate is growing above the average of total investment, and presently accounts for about one-quarter of total investment.

Figure 3:  
External Debt as Percentage of GDP and Debt Service as Percentage of Export Revenues, 1980–2004



Source: Institute of International Finance, China Database <iif.com> (April 2005).

2004)—both through a recapitalization of the state banks and through stricter regulations imposed by the Banking Regulatory Commission—it will probably take years before banks actually adopt a risk-oriented lending policy and the stability of the banking sector is ensured.

Against this background, restrictive policies to put a damper on the dynamic investment activity should be high on the agenda. In fact, this is well-understood by the Chinese government (Li 2005). The first measures—an increase in reserve requirements for financial institutions—were already introduced in spring 2004. The focus is not on market economy mechanisms, though; the 25 basis points key rate hike in late October 2004 should rather be seen as a symbolic step. Instead, the government has issued direct controls on investment programs and bank lending. In fact, these measures have already begun to have an effect, as the volume of bank loans almost remained constant in the second and third quarters of 2004.

But in stark contrast to the wishful thinking of newspaper reports and government statements in

late 2004, there has not been any significant cooling of the economy yet. In the first quarter of 2005, real GDP expanded by 9.4 percent year-over-year, which is the same percentage rate as the average rate for 2004, and goods exports were 35 percent higher, which is the same percentage rate as the average rate for 2004. And nominal capital spending has only slightly lost momentum: in the first quarter of 2005 it was still 28 percent higher than in the same period of the year before—down from 38 percent growth during 2004 and 30 percent during 2003. Almost by definition, the recommended reduction of the macroeconomic investment ratio cannot be achieved as long as investment is still growing faster than GDP. Hence, a lot remains to be done.

What is behind the apparent ineffectiveness of restrictive policies? The bulk of investments is either by state-owned enterprises or—quite common on the local government level—by joint public-private ventures. Hence, direct government controls could be effective in general. We have only presumptions to offer: First, other



sources were available to fund the rampant growth of investment. In 2004, net capital inflows—approximated by reserve inflows minus current account surplus minus net FDI inflows—stood at more than US\$80 billion. Yet, external finance is only a small fraction of total investment unless one assumes huge unrecorded inflows. Second, private domestic savings—either retained profits or additional household savings—may be used directly without channelling them into the banking sector. In China, there is only a narrow range of financial assets available, and that at relatively low yields, and private capital export is only partially liberalized.<sup>6</sup> Hence, private investment in real estate seems to be much more attractive. Third, public revenues may have been redirected into investment at the local level. Indeed, the central government has only limited control over local government bodies (Dabla-Norris 2005).

So the Chinese economy still has to prove whether it can avoid a “hard landing.”<sup>7</sup> We expect to see only a gradual slowdown in 2005 to the previous years’ average. Investment will gradually cool down, since the sustained tightening of the Fed allows further interest rate steps of the People’s Bank of China (Xie 2005b). Chinese exports will eventually lose momentum, which should also reduce the degree of capacity utilization in the highly export-oriented industries. Yet the effect on GDP will be relatively moderate, as the bulk of exports are based on imported intermediate inputs, which means that the economy will also absorb fewer imports. Additionally, there have been no indications yet that the dynamic capital spending activity will come to an end any time soon nor that the government will adopt a stricter growth-dampening policy.

The dilemma of the central government can easily be described in terms of the “impossible trinity”: the fixed exchange rate and the (de facto) open capital account prohibit an indepen-

dent monetary policy. Accordingly, a significant hike in interest rates would attract even more foreign capital and hence increase the credit potential. But this is only the monetary view on the present situation. A complementary view is provided by the discussion of long-run growth strategies: overinvestment and restrained consumption seems to be typical for the “export-led growth” strategy, which is still popular in East Asia (ADB 2005), at least for the early phase. The analysis in the following sections will show that these are not the consequences of whatsoever growth strategy but of an undervalued currency in combination with wage restraint (i.e., real wages growing at rates below the productivity growth rate). For the time being, we note the relevance in China’s present situation of not only dampening investment but at the same time stimulating private consumption.<sup>8</sup>

### 3 Is the Chinese Currency Undervalued?

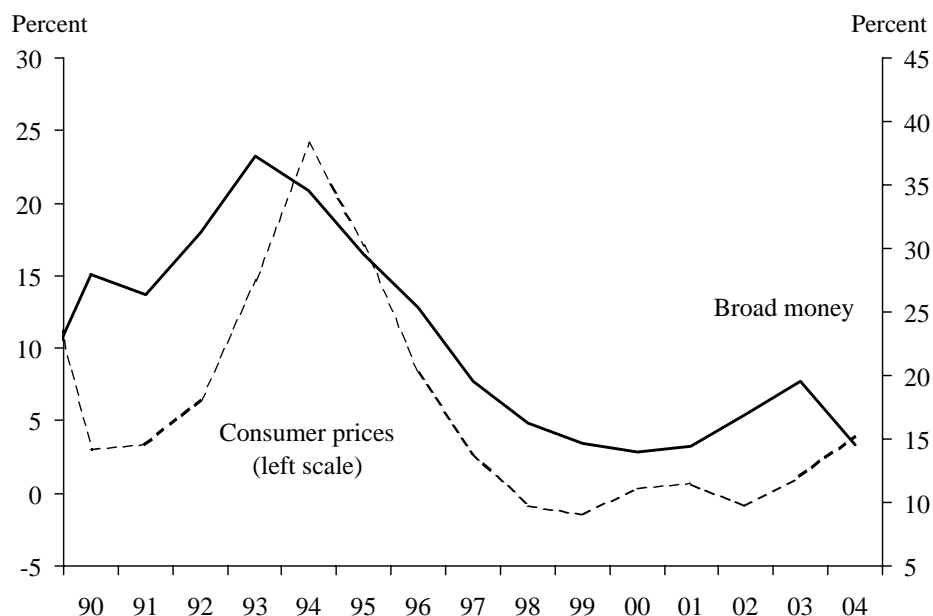
In addition to the alleged overheating of the Chinese economy, there is a second stereotype about China: high trade surpluses engineered by an artificially low exchange rate. To assess the foreign economic situation in China, it is again worthwhile to take a look at the long-term development. Unlike many other developing countries, including Southeast Asia before the 1997/98 crisis, China is posting current account surpluses of an average 3 percent of GDP. As a result of China’s economic opening to foreign investors, which was initiated some ten years ago (“Deng Xiaoping theory”), China has become increasingly integrated in the regional production networks in East Asia. Meanwhile, exports to China (incl. Hong Kong SAR) account for

<sup>6</sup> The lack of sufficient alternatives to bank deposits may explain the paradox of sustained high growth rates of broad money but low rates of goods prices inflation (Figure 4).

<sup>7</sup> Simulations by the IMF (2004a: Box 1.2) show that the consequences of such a scenario could be grave not only for China but also for the whole region.

<sup>8</sup> The importance of this shift is highlighted by simple calculations: Assuming a sudden stagnation of real investment would lead to a reduction of the GDP growth by half, *ceteris paribus*, that is, without changes in the growth of other expenditure aggregates. And if real investment shrinks by more than 10 percent—which is not far-fetched, given the swing of typical business cycles—GDP growth, *ceteris paribus*, would become negative.

Figure 4:  
Annual Changes in Broad Money and Consumer Prices, 1990–2004



Source: National Bureau of Statistics of China via ECOWIN (April 2005).

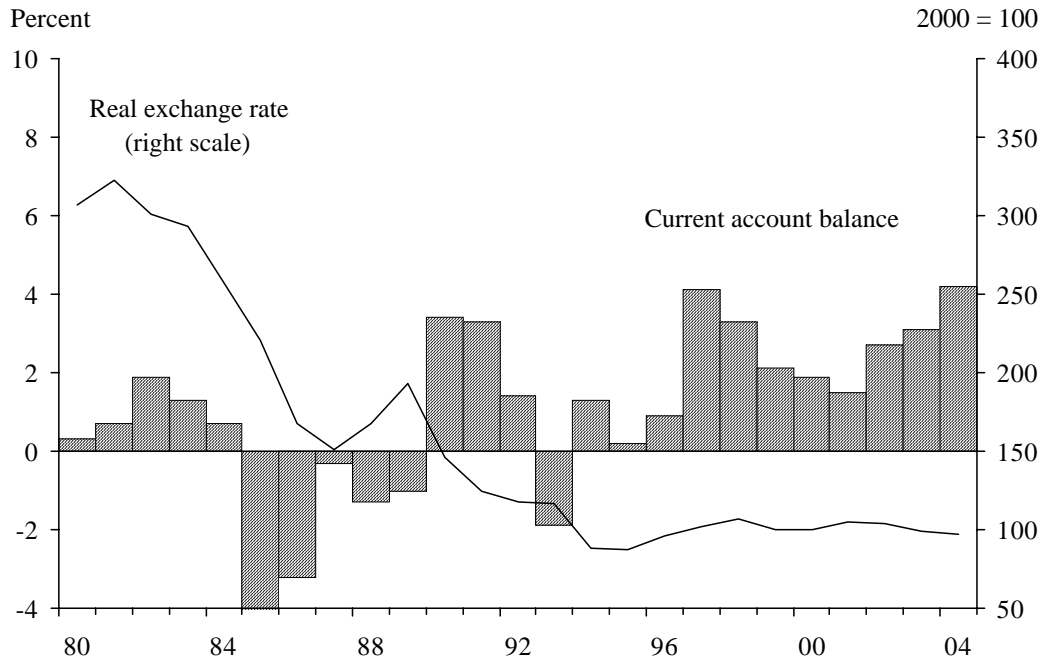
almost 20 percent of total exports in Japan, and even more in Taiwan and South Korea. The strong real depreciation of the Chinese currency in the eighties and early nineties probably intensified this trend (Figure 5). After all, the parity of 8.28 yuan per U.S. dollar was fixed only in 1997. Until 1994, the real external value declined to about one-third of the 1983 level; since then, it has hardly changed. Against this background, the acceleration in exports and foreign capital inflows is not surprising. However, this does not justify the conclusion that the Chinese currency is clearly undervalued.

Unfortunately, there is no single uncontroversial indicator to assess whether a currency is undervalued or not. In some recent economic studies, the current degree of undervaluation of the renminbi is estimated at 15–40 percent, whereas others conclude that the currency is close to its fair value (Funke and Rahn 2005 for a survey). However, the extreme values in the range of estimates are based on assumptions that are inappropriate in our view: Judgments of “no undervaluation” are mainly derived from an approach in which the fair value is simply the underlying trend of the actual exchange rate; hence it comes as no surprise that the deviation

from the fair value is rather small and vanishes on average. By contrast, estimates of a large undervaluation are often derived from a multi-country model in which each nation is assumed to have a zero trade balance. This comes close to the fixation of U.S. representatives on the bilateral trade deficit of the United States with China,<sup>9</sup> which is definitively not a candidate for a serious indicator: first, it is not the bilateral trade balance that matters but the overall balance; since China runs deficits with many East Asian economies, the overall balance is only a fraction of the surplus with the United States. Second, the value of a currency is not only determined by trade flows but also by capital flows. Thus, even for economies with relatively closed capital accounts, other positions of the balance of payments should be taken into account; in other words, the net inflow of foreign exchange is a much better measure than the balance of trade.

<sup>9</sup> There is a certain tradition of accusing other countries as being responsible for the large imbalances of the U.S. economy through “exchange rate manipulation.” The role played by Japan in the early 1980s and Korea/Taiwan in the late 1980s now seems to be taken by China in the last few years.

Figure 5:  
Real Exchange Rate and Current Account Balance as Percentage of GDP, 1980–2004



Source: Institute of International Finance, China Database <iif.com> (April 2005).

A simple but in our view still imperfect method analyzes the development of relative prices. It attempts to identify periods of undervaluation by large deviations from purchasing power parity for tradable goods. However, since relative prices are hardly available for single goods but only for broad baskets, e.g., producer price indices for manufactures, a necessary ingredient for this approach is the calibration of relative prices to a period without over- or undervaluation. Without any additional criteria, this leads to an infinite regress or to an arbitrary choice.

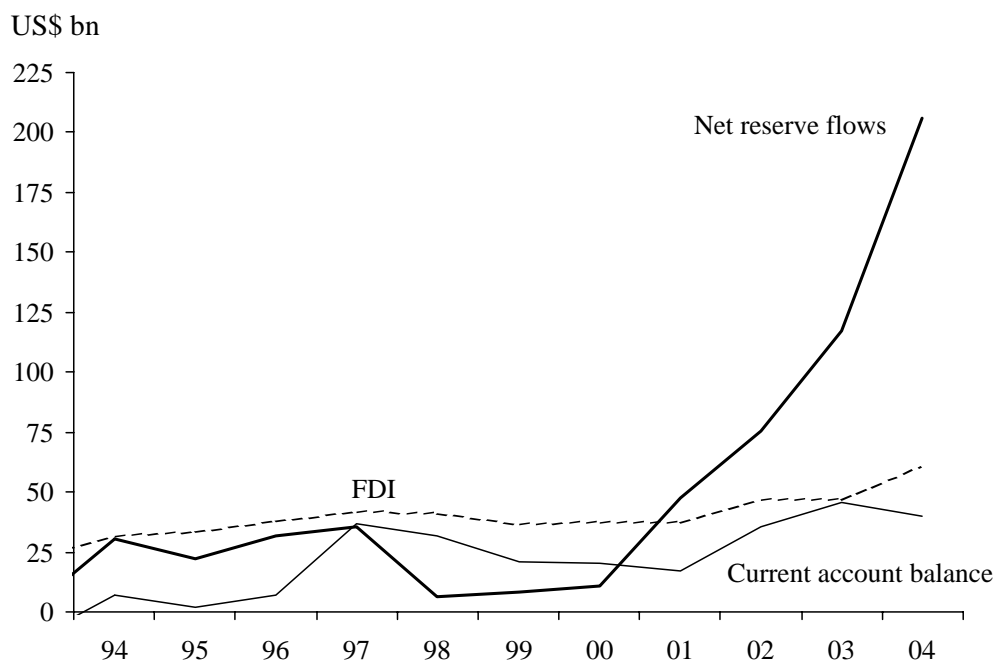
A way out of this dilemma could be provided by a small macroeconomic framework, based on simple behavioral assumptions. Accordingly, a currency is neither over- nor undervalued if the economy is in macroeconomic equilibrium with a sustainable GDP growth rate and a sustainable current account balance. This framework avoids the problem of self-fulfilling prophecy that is intrinsic to the indicator “reserve inflows” and at the same time it is flexible enough to allow for sustained trade surpluses or deficits. It has to be noted, however, that this method still contains

significant subjective judgments (i.e., the determination of a “sustainable” GDP growth rate and a “sustainable” current account balance), but these judgments are revealed and thus open to debate. In simple terms, both of these variables are deemed to be “sustainable” if private expenditures and private capital flows are sufficient to stabilize the present situation for a long time.

In China, the continued increase in official currency reserves since 2000 suggests that the potential for an appreciation is being suppressed in that period (Figure 6). In other words, the current account surplus in the order of 3 percent of GDP seems not to be sustainable. It is conceded that the focus on foreign reserve inflows bears an element of self-fulfilling prophecies, since a currency broadly deemed to be undervalued may attract a huge amount of speculative capital<sup>10</sup>—thus being identified as undervalued by this indicator—although it is not fundamen-

<sup>10</sup> In that respect, the recent tightening of the Fed funds rate to 3 percent should have led to diminishing speculative inflows, since the holding of renminbi assets, financed with US\$ credits, now costs about 1 percent p.a., and this value will most likely increase to 2 percent until the end of 2005.

Figure 6:  
Current Account Balance, FDI, and Net Reserve Inflows, 1994–2004



Source: Institute of International Finance, China Database <iif.com> (April 2005).

tally undervalued. That is the reason why some economists recommend not to revalue the renminbi but to sit out the wave of speculative inflows and to lift capital export regulations. However, reserve inflows are at high levels for at least three years, which makes the hypothesis of a wave of speculative inflows unlikely. Hence, we concede a certain undervaluation of the renminbi, perhaps in the order of 10–20 percent.

However, this is not to say that China followed a “beggar-thy-neighbor” policy by defending an undervalued exchange rate with all means, although the U.S. government makes exactly this case. We do not want discuss the political economy behind such accusations; suffices to mention that, back in 1998, representatives of the IMF and some governments regarded the renminbi as slightly overvalued and pressed the Chinese government not to devalue their currency in order to prevent a “competitive devaluation race” in the aftermath of the Asian currency crisis. But if we take political economy aside, it seems to be common sense that not only overvalued exchange rates have their disadvantages but also undervalued exchange rates.

What serves a country well in the first phase of its integration into the world economy—namely, a competitive exchange rate, mildly undervalued rather than overvalued—may become a serious problem, once this integration has made large progress. As a rule of thumb, the normal pattern for developing countries in the process of catching-up is a certain real appreciation trend<sup>11</sup> (IMF 2004b; Williamson 2004).

Until mid-2004, the mantra of the Chinese authorities was that they will not surrender the exchange rate peg, since they are concerned about the negative impact on exports and, hence, on employment. Given the intersectoral migration from agriculture to industry and the hidden unemployment in state-owned enterprises (SOE), these concerns are to be taken seriously. However, a remarkable shift in political statements could have been observed in the past six months.

<sup>11</sup> It should be noted that the effective real depreciation of the renminbi is due to the unilateral fixation to the dollar in a period when the U.S. dollar weakened against the major currencies. Against this background, it has been recommended to peg the renminbi to a currency basket rather than to the U.S. dollar.

Though the Chinese government is still reluctant to float the exchange rate and to liberalize international capital movements in a big bang, economists and politicians talk about the need to “develop the foreign exchange market” and to “adjust the exchange rate.” At the same time, however, concerns are expressed that an improper sequencing with financial sector reforms or wide fluctuations of exchange rates would put too large a burden on the economy. Costs and benefits of a revaluation of the Chinese currency are discussed in the following section.

#### 4 Does China Need a Nominal Appreciation?

The impact of a nominal appreciation depends crucially on the diagnosis of the macroeconomic situation. Following Frankel (2004), the Chinese economy moved from recession (Ch 2002) to overheating (Ch 2004) with an increasing extent of undervaluation (Figure 7). Most China watchers seem to base their policy conclusions on the assumption that this is a realistic picture of China these days. If this is indeed a correct assessment, the present policy mix should work and bring the economy to equilibrium. As shown in the figure, the strong reserve inflows pull the economy in direction [1], which would imply restoring external balance by increasing absorption and, hence, demand for imports. Chinese authorities try to avoid this expansionary effect by increasing interest rates, a mild fiscal restraint, sterilization of foreign reserve inflows, and an active credit allocation policy.

The restrictive macroeconomic policy mix has its limits. With financial reform pending on progress with reform of SOEs, the core of China’s problem, full use of the interest rate for macro management is not possible. With respect to fiscal policy, extra revenues are used to lower the fiscal deficit. However, for a developing country fiscal priority is on allocation and improving the infrastructure badly needed for solving problems stemming from unequal (personal and regional) development. But, for the time

being, restrictive fiscal policy is useful in combination with other instruments like direct credit controls and sterilization of foreign exchange inflows and seems to work.

These policies currently pull the economy in direction [2]. Because of excess demand for nontradables inflationary pressure should then lead to a real appreciation and pull the economy towards external balance [3]. With a positive inflation differential against the anchor currency, the Chinese economy could then move along the external balance line towards equilibrium. The flexibility of prices in China implies that automatic adjustment mechanism should work. Normally, the hard test for a fixed exchange rate regime is that a deflation is sustained (see Schweickert 1996). This was the case in China after the Asian currency crisis in 1997 up to 2002. Inflationary pressure is normally less of a problem for real exchange rate adjustment.

Hence, nominal appreciation is not necessary to reach internal and external equilibrium. This could be achieved by an appropriate policy mix plus inflation.<sup>12</sup> Nevertheless, nominal appreciation could help to speed up real appreciation by reducing expansionary pressures [1] but may create uncertainty about the future exchange rate policies.

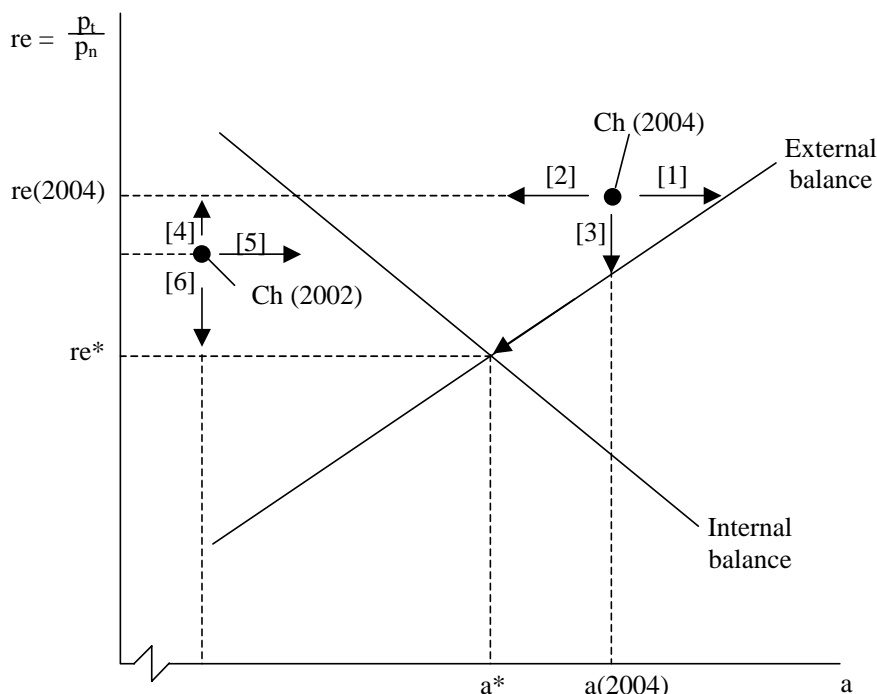
As discussed in Section 1, however, a grain of salt should be added to the diagnosis of overheating as implied by a situation like (Ch 2004) in Figure 7. Possibly, China is still in a situation characterized by (Ch 2002), because an investment boom prevails rather than a consumption boom. Overinvestment implies that capacities increase faster than demand. As can be seen in the figure, this is consistent with the diagnosis of an undervalued exchange rate. The consequence would be a downward pressure on prices for nontraded goods [4]. This would explain why inflationary pressures are currently rather moderate in China, a fact which does not fit the overheating hypothesis.

If overinvestment is assumed, the present policy mix cannot bring China closer to equi-

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<sup>12</sup> An alternative way of achieving a real appreciation would be to raise export tariffs on a broad basis (Lau and Stiglitz 2005). The recent increase in export tariffs on textiles is not sufficient in this respect.

Figure 7:  
Internal and External Balance with Traded and Nontraded Goods<sup>a</sup>



$re = \frac{p_t}{p_n}$   
 $re =$  real exchange rate,  $p_t =$  price of traded goods, and  $p_n =$  price of nontraded goods

<sup>a</sup>This graph has been adapted from Frankel (2004) with replacing the interest rate by absorption on the horizontal axis. The intention behind the internal balance curve is that an increase in the price for nontraded goods (real appreciation; decline in  $re$ ) would require an increase in absorption to restore internal equilibrium and a decrease in absorption (and, hence, import demand) in order to restore external balance. Points to the right (left) of the internal balance curve mark excess demand (supply) in the home market, while points to the right (left) of the external balance curve lead to increasing exchange reserve outflows (inflows), because the small country assumption applies.

librium, because the restrictive policy mix, meant to counter the expansionary effect of liquidity inflows, keeps the Chinese economy in a situation of excess supply. This implies that price increases are contained keeping the exchange rate undervalued and suppressing demand. Hence, the restrictive policy stance extends overinvestment, thereby leading to potential misallocation, and increases future adjustment costs.

The adequate prescription in this case would be to allow for expansion, either fiscal or monetary, in order to stimulate consumption [5]. This would restore internal balance and, with accelerating inflation, bring the economy back to macroeconomic equilibrium along the internal balance line. As can also be seen in Figure 7, a nominal appreciation [6] in this situation increases internal imbalances. This seems to be the

underlying reasoning for the estimates that a 10 percent revaluation would destroy (or prevent the creation of) half a million industrial jobs (Garber 2003). The internal imbalances basically refer to the highly uneven growth process in China, i.e., the real exchange rate would become overvalued for most regions and sectors. Some estimates put China's unemployment rate as high as 15 percent of the labor force, which implies that, in the absence of a safety net to speak of, a large revaluation could create substantial adjustment problems. From the Chinese point of view this implies that wage adjustment should be much more efficient than exchange rate adjustment (Xie 2005a). Strong wage increases in high-growth regions and sectors could increase the price of nontradables.

There are considerable downside risks involved. Monetary expansion could feed into even more investment, and higher wages in SOEs could create the need for throwing even more good money into this dump. Fiscal expansion could be an alternative. Additionally, the risk of overshooting with respect to exchange rate adjustment is much more virulent than in the case of overheating. Hence, parity adjustment is not necessary in both scenarios, while exchange rate flexibility would be even more risky in the case of overinvestment. All in all, there are considerable risks attached to lifting the exchange rate anchor at this point of the transformation process in China.

Currently there is a bunch of proposals for such a step, summarized in the paper by Eichengreen (2004): step appreciation, step appreciation with a shift to a basket peg, step appreciation with a later shift to a float, managed float. All proposals which adjust the peg have the problem that the Chinese authorities have to convince the market that this will not be repeated, an argument which runs in favor of a rather large appreciation. As outlined above, the implications of a large appreciation depend on the diagnosis. It reduces internal imbalances in the case of overheating, but increases internal imbalances in the case of overinvestment. The superior strategy seems to be to stimulate consumption and to allow for inflation to adjust the real exchange rate. This implies to use monetary and fiscal policies conditional on the observed inflationary pressure. A small revaluation of the parity is not necessary and should only be used to support such a strategy. To abandon any explicit band for the exchange rate and to move to some form of independent monetary policy to guide expectations is the more general question.

## 5 What Would an Optimal Sequencing Suggest?

Current discussions focus on the problem of sequencing capital mobility and exchange rate flexibility (see, e.g., Prasad et al. 2005). The

base line of the sequencing debate is that it would be better to learn to float, while the capital account is still relatively closed. According to this view, the banking system is unlikely to be subject to substantial stress simply as a result of greater exchange rate flexibility. Chinese banks do not have a large net exposure to currency risk. In 2003, net foreign assets of the banking system accounted for 3 percent of broad money and 6 percent of GDP, and foreign-currency lending constituted about 5 percent of domestic credit and 9 percent of GDP. Even before the spectacular reserve inflows in 2004, foreign assets of the banking system did not reach 20 percent of assets accumulated by the PBC. However, detailed information on exposures of large financial institutions would have to be analyzed in order to determine the exposure of specific institutions and any possible systemic spillovers that could result from exchange rate fluctuations. Moreover, there is little information on hedging practices in the corporate sector apart from the denomination of processing imports and related exports in the same currency. Assuming that negative effects on the banking system are limited, more exchange rate flexibility could be supported by the maintenance of capital controls. This would insulate the economy from disruptions caused by volatile capital flows, while institutional arrangements needed to support capital account convertibility are allowed to develop in the meantime.

However, the capital account is already far from being closed with the most likely channel for speculation being real estate, i.e., inflows of “black money” fueling an asset price bubble. Speculation is hardly avoidable because of close links to Hong Kong, i.e., leakages increase rapidly over time. Hence, exchange rate flexibility should be introduced rather earlier than later (Eichengreen 2004).

The important issue here is, however, that a critical minimum development of the domestic capital market is needed for both opening up the capital account and exchange rate flexibility. With respect to the capital account, this is documented in numerous academic contributions and by the lessons from the Asian crisis (see, e.g., Diehl and Schweickert 1998). With respect

to exchange rate flexibility, a recent IMF paper (Duttagupta et al. 2004) analyzed the operational aspects of moving from a fixed to a floating exchange rate. According to this paper, a rapid exit strategy offers important advantages only if the institutional underpinnings for operating a floating exchange rate are in place (Figure 8). Many of the operational steps require substantial time to develop, and countries should lay the groundwork before exiting a peg. First steps before allowing a limited exchange rate flexibility include to secure central bank independence, to improve inflation-forecasting capacity and monetary policy transparency, to develop information systems on foreign exchange risk, and to increase information on balance of payments developments. In the absence of supporting institutions and markets, a gradual exit strategy may be more appropriate, as it reduces the risk of excessive exchange rate volatility and its potentially adverse effects on market credibility, inflationary expectations, and balance sheets.

As already mentioned above, the domestic capital market in China is in a process of reform driven by WTO membership agreement, which demands full competition from foreign-owned banks by the end of 2006 (Sachs and Woo 2003). Before China's WTO entry in 2001, the domestic capital market was characterized by the absence of adequate financial intermediation. As a result, aggressive reductions in lending rates from a high of about 10 percent in 1997 to below 6 percent in 1999 took a long lag before resulting in an increase in money and credit supply. The reason was that without competition and with ratios of nonperforming loans at almost 50 percent the big four state-owned banks faced strong disincentives to lend except to the government. Since then, the picture has changed considerably. After several injections of capital and shifting bad loans to asset management companies, the ratio of nonperforming loans is now below 20 percent (Barnett 2004) but a hike in interest rates could still seriously endanger the fragile stability of the Chinese banking system. Additionally, higher lending rates could easily increase the ratio of nonperforming loans unless nonfinancial state-owned enterprises are not ready to face competitive pressures. The flexi-

bility of interest rates, however, is a precondition for efficiently targeting money supply and inflation without administrative interventions into credit allocation.

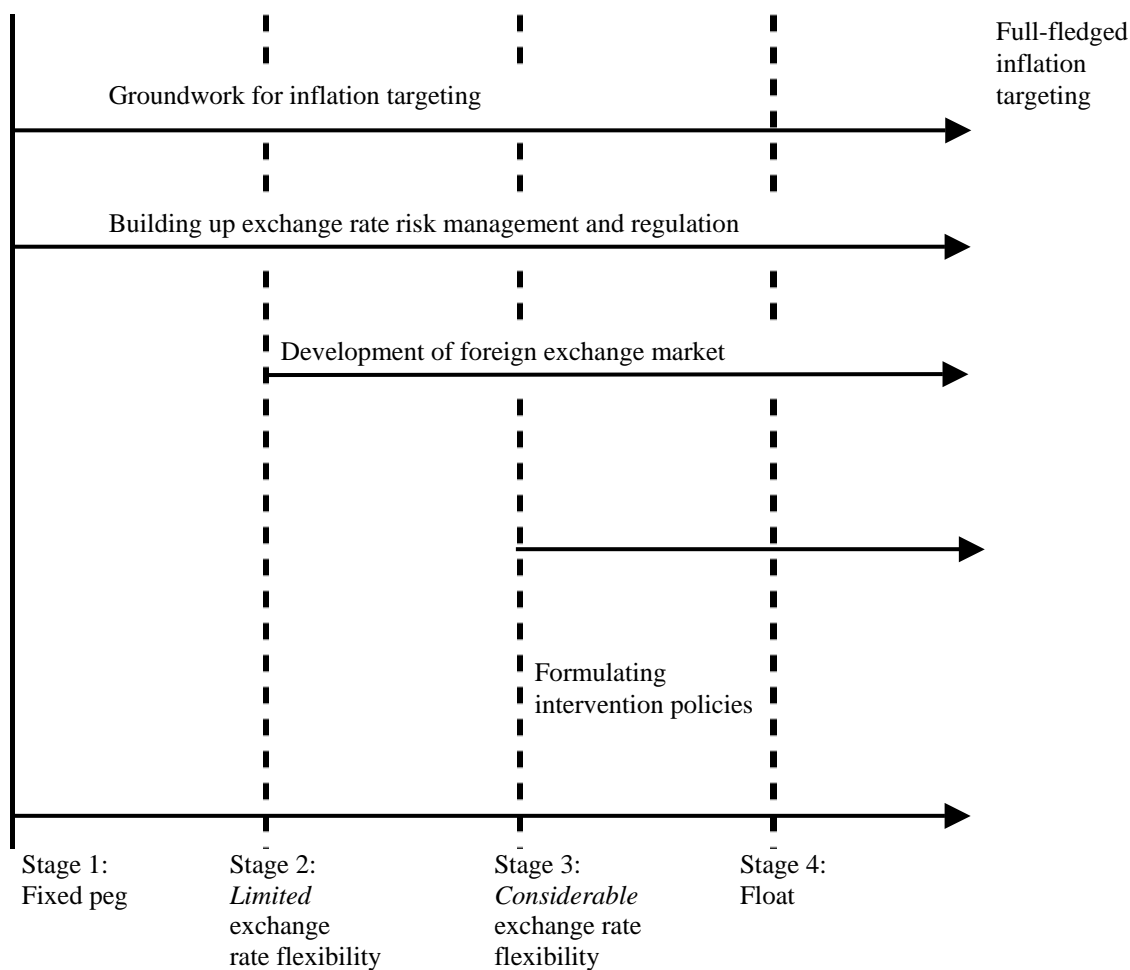
Whatever the exit strategy, making the exchange rate more flexible should best be done in a situation characterized by two-way risk in exchange rate movements, i.e., it is critical to adjust the parity so that the flexibility offered by the bandwidth is not quickly exhausted by a potential misalignment (Duttagupta et al. 2004). Frequent adjustments of the bandwidth can impair market credibility and lead to speculative pressures to test the band limits. Given the wide range of perceptions about an undervaluation of the renminbi it seems very difficult to phase in flexibility by adjusting the parity and widening the band only slightly.

Hence, China is right to be careful about lifting the exchange rate anchor. The highest policy priority is to speed up domestic capital market reform and to allow for higher inflation rates. Exchange rate adjustment could be used if necessary in order to avoid the inflation rate to pass a (not announced) threshold. A plausible strategy could be to bring the renminbi to parity with the Hong Kong dollar, which roughly translates into a six percent appreciation of the renminbi versus the U.S. dollar.

In a second stage, exchange rate flexibility could be introduced. A critical precondition for switching from a fixed to a flexible rate is that one-sided speculation should be excluded. This is not the case at the present parity—given the widespread upvaluation expectations—but would require a substantial discretionary adjustment of the exchange rate (Figure 7). After the Chinese economy has reached a situation closer to equilibrium, China could follow the Chilean blueprint and implement a crawling peg determined by U.S. inflation and a target for the domestic inflation rate plus a narrow band (Schweickert 1996). Frankel (2004) estimates that an inflation target consistent with eliminating overvaluation would be U.S. inflation plus 4 percent resulting in an target rate of about 5–6 percent. This would allow China to shy away from a more ambitious target rate in order to avoid deflation in regions with lower than average growth rates



Figure 8:  
Sequencing of an Exit from a Fixed Exchange Rate Regime



Source: Duttagupta et al. (2004).

and—if complemented by a commitment—to stabilize inflation rates around that target. Over time, small discretionary adjustments of the parity which may be necessary to help control inflation and maintain external equilibrium could be replaced by a wider band, i.e., more exchange rate flexibility. Such a preannounced policy switch would allow China to phase in an inflation targeting regime by ending credit controls and formulating targets, while the capital account is opened up.

## 6 Conclusions

During the 1980s and 1990s, the Chinese economy grew at very high rates while, at the same time, the value of the Chinese currency revealed a strong downward trend. Since 1983, the renminbi has declined to only about one-third of its real external value. Moreover, large current account surpluses and strong inflows of foreign exchange led to accusations especially from the U.S. government that China follows a beggar-thy-neighbor policy by defending an undervalued exchange rate, while the economy is overheating. To the contrary, the Chinese authorities pledge that they will not surrender the peg, since they

are concerned about the negative impact on exports and, hence, employment.

We argue that the answer to the exchange rate question depends on the diagnosis of China's macroeconomic situation. If it were sure that the economy is overheating, a nominal appreciation may help reduce reserve inflows and allow for a more autonomous monetary policy. However, exchange rate adjustment is not necessary to bring about the real appreciation. Overheating should automatically lead to an increase in domestic inflation rates above the U.S. level, which—given the fixed nominal exchange rate—delivers the real appreciation. Additionally, it is uncertain to which extent the inflow of foreign exchange is due to currency speculation and how these speculative inflows react to an adjustment of the exchange rate. Given that the exact extent of undervaluation is uncertain, both sharply increasing or decreasing inflows are conceivable. In the latter scenario, exchange rate adjustment would exactly provoke the hard landing which it should help avoid.

However, there are certain signs that the Chinese economy is not characterized by overheating but rather by overinvestment as indicated by the strong expansion of investment above 40 percent of GDP, the increase in real estate prices in high-growth regions, and the lack of a strong increase in consumer prices. In that case, the present policy mix of the Chinese authorities, consisting of restrictive monetary and, to some extent, fiscal policies, is preserving the situation of excess supply and undervaluation. A nominal appreciation would even increase the internal imbalance, as claimed by Chinese authorities.

In our view, the diagnosis is unclear to some extent with respect to overheating versus overinvestment, while undervaluation can be taken as a stylized fact. Hence, a practical possibility to manage short-run adjustment would be to allow for less restrictive monetary and fiscal policies conditional on the development of the consumer price inflation which should be allowed to show a positive differential versus the U.S. consumer price inflation.

Apart from such short-run consideration, the more general question is how to sequence a shift to a flexible exchange rate regime, which seems to be adequate for a large country like China. On the one hand, it is plausible that China should learn to float, while the capital account is relatively closed. On the other hand, both opening up the capital account and introducing exchange rate flexibility need a certain degree of capital market development. Additionally, one-side bets on the direction of exchange rate movements when giving up a peg should be avoided. Both preconditions are currently not given in the case of China.

Therefore, the priorities for balancing short-run adjustment and long-run optimality are (1) a real appreciation via higher consumer price inflation and (2) speeding up domestic capital market reform as long as capital controls are effective to some extent. This should allow phasing in an augmented inflation targeting regime and avoiding a hard landing, which may be provoked by lifting a solid exchange rate anchor in stormy waters.

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