

The Structural Obstacles to Macroeconomic Control in China

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Introduction

The past eight years has been a mini-roller coaster ride for China's Economy. The CPI-based inflation rate fell quickly from 5.9 percent in January 1997 to -2.2 percent in April 1999, climbed slowly up to 1.7 percent in May 2001 before declining to -1.3 percent in April 2002, and then surged to 5.3 percent in July 2004, see Figure 1. Output growth reflected this roller coaster characteristic as well, with GDP growth dropping from 9.6 percent in 1996 to 7.1 percent in 1999, and then recovering to 9.4 percent in 2003. Jonathan Anderson of UBS has suggested that the 2003 rebound has really been higher than the official growth figure, and he estimated GDP growth in 2003 to be 11.6 percent instead.

This stop-and-go nature of the economy in the 1997-2004 period has actually been a constant feature of China's post-1978 economy. Table 1 shows the following see-saw pattern:

- 7.8 percent in 1980 to 5.2 percent in 1981,
- 15.2 percent in 1984 to 8.8 percent in 1986,
- 11.6 percent in 1987 to 3.8 percent in 1990, and
- 14.2 percent in 1992 to 7.1 percent in 1999.

The aim of this paper is to propose an explanation for why the Chinese economy is susceptible to quick, large shifts in macroeconomic balance. This paper will proceed as follows:

1. explain the recent macroeconomic record by focusing on the interaction between China's policies and structural characteristics,
2. examine the working of the financial system,
3. analyse the dynamic implications of the precarious fiscal situation, and
4. discuss the exchange rate issue within the general macroeconomic context.

The Internal Macroeconomic Pressures and External Political Pressures on China's Policymakers

Table 1 also shows that the trend growth path around which the macroeconomic cycles fluctuate has a shallower trajectory from about 1997 onward. This hypothesis of a lower trend growth rate comes from combining the two facts:

- (a) that the average annual growth rate in the 1979-2003 period is 9.4 percent, and
- (b) none of the growth rates in the 1997-2003 subperiod exceeded 9.4 percent. The latest growth recovery registers only 9.4 percent in 2003, and is expected not to exceed 9.4 percent in 2004.¹ This extended period of below-average growth is unprecedented in the market reform period.

When we compared the mean growth rate of the 1979-1996 subperiod (9.92 percent) with the mean growth rate of the 1997-2003 subperiod (8.06 percent), we found the difference between them to be statistically significant. The t-statistic is 2.20. Our hypothesis that China has entered into a slower growth phase slower in 1997 is consistent with the employment data reported in Table 2. The average annual employment growth in the industrial sector was 2.8 percent during the 1992-1997 period, with a minimum of 2.1 percent in 1997. The employment growth rate fell significantly after 1997: 0.3 percent in 1998, -1.1 percent in 1999, -1.2 percent in

¹ Huang Yiping has predicted a 2004 GDP growth rate of 9.2 percent in the September 23, 2004 issue of the CitiGroup (HK) newsletter, and Ma Jun has predicted it to be 9.4 percent in the October 14, 2004 issue of the Deutsche Bank (HK) newsletter.

2000, and 0.4 percent in 2001. The employment situation in the manufacturing component of the industrial had actually turned bad earlier in 1996. Manufacturing employment growth was negative throughout the 1996-2000 period, with a particularly large decline of 13.5 percent in 1998.

As if China's macroeconomic managers are not already sufficiently vexed by the present signals of "lower trend growth" and "slower employment creation", they are now also facing tremendous political pressures from Japan, Western Europe, and the United States to revalue the Renminbi (RMB) substantially.² The current round of external indignation over an undervalued RMB was set off on 1 December 2002 when two senior officials of Japan's ministry of Finance wrote in the *Financial Times* that "China is exporting deflation...through export growth and a combination of price deflation and an exchange rate pegged to the dollar," and they asked China "to allow the currency to appreciate."³ By mid-2003, South Korea, Western Europe, and the United States have joined Japan in urging an appreciation of the RMB to reduce unfair competition from cheap Chinese imports.⁴ How China will respond to this foreign clamor for RMB revaluation will, not surprisingly, depend on its diagnosis of the current macroeconomic situation. If Chinese leaders conclude that deflation is politically more costly than overheating, then there would be at most the introduction of a minor trading band around the current RMB-US\$ exchange rate.

In assessing what the appropriate stance of macroeconomic and exchange rate policies should be, the foremost relevant analytical issue is whether China is already at the "natural"

² For example, "Snow calls on Beijing to let currency float," *Financial Times*, 2 September 2003.

³ Haruhiko Kuroda and Masahiro Kawai, "Time for a switch to global reflation," *Financial Times*, December 1 2002

⁴ See, for example, "Behind the Debate over China's Currency," *Barrons*, 28 July, 2003; "U.S. Job Losses Blamed on China's Currency," *The New York Times*, 26 August 2003; and "Economic ministers discuss Chinese currency," *Pacific Business News*, 23 July 2003.

growth rate, i.e. the maximum sustainable output growth rate that is compatible with price stability. The operational difficulty is that the natural growth rate of an economy is not immutable over time, e.g. a change in the rate of technological innovation would change the natural growth rate. In our view, there are two components to understanding the recent macroeconomic performance of China.

The first component is that the growth of aggregate supply has slowed down since 1997. We think that the slower growth phase near the end of the 1990s is the result of China having largely exhausted the growth potential created by the significant economic deregulation and internationalization. Our interpretation of a growth slowdown upon economic maturation is based on our more general view that the impressive post-1978 growth of China was generated by the steady convergence of a formerly autarkic developing country to the frontier of modern science.⁵ The closer to the world science frontier, the lower is the catch-up rate of growth -- which is consistent with the slowing down of the average growth rate in the 1979-96 subperiod from 9.9 percent to 8.1 percent in the 1997-2003 subperiod.

The second component of our explanation of recent macroeconomic performance is identified from the large downward shift in the RPI-based⁶ inflation rate between the two subperiods, an annual average of 7.8 percent in 1979-1996 versus -1.2 percent in 1997-2003.⁷ Clearly, there must also have been a slowdown in the growth of aggregate demand because in the absence of a drop in aggregate demand growth, a fall in supply growth (as identified above)

⁵ Our view that China's impressive growth rate has been generated by its steady convergence to a normal private market economy is a contested one, however. There is also the popular view that China's growth is the result of successful policy experimentation that has discovered growth mechanisms (most of which are non-capitalist in nature) that are optimum for China's particular circumstances. This convergence-experimentalist debate is reviewed in Woo (1999) and Woo (2001).

⁶ RPI = retail price index (whose coverage excludes services and housing). The CPI is available only from 1985 onward.

⁷ The difference in means of the two subperiods has a t-value of 5.6.

would have produced an outcome of lower growth-cum-higher inflation (i.e. stagflation) rather than the observed outcome of lower growth-cum-deflation. More precisely, the lower growth-cum-deflation phenomenon in the 1997-2003 subperiod means that the slowdown in aggregate demand growth was greater than the slowdown in supply-side growth.

In the next section, we will develop the argument that China's recent deflation is an unusual episode in the post-1978 macroeconomic history of China. China has, in fact, a built-in inflationary tendency because of the partially-reformed nature of its economic system. And then in the following section, we will make the case that China's dysfunctional banking system impacts a deflationary bias to the economy whenever the government forces the state enterprises to face hard budget constraints.

Systemic Inflationary Tendency: The Liquidity Tango Until 1995

Our contention is that the post-1978 marketisation of the economy has interacted with the continued state ownership of the key industrial and financial enterprises⁸ to create an inherent inflationary tendency within the economy. Specifically, the marketisation of China's economy began by emphasizing decentralisation reforms rather than the promotion of private economic activities, and this created a inflationary "liquidity tango" between the state-owned enterprises (SOEs), and the state-owned banks (SOBs). The mechanics of this "liquidity dance" are as follows.

The increased operational autonomy given to the SOEs caused the "thirst for investment" phenomenon to appear. This large surge in demand for investment funds by SOEs is the product of two factors:

⁸ In Leninist terminology, the state kept control of "the commanding heights of the economy".

- (a) a decline in the ability of the state to monitor the financial integrity of the transactions of the SOEs. (Once the SOEs had the rights to make purchases and sales at prices they negotiated themselves, it became very hard for the state to detect embezzlement via under-invoicing.); and
- (b) the unwillingness of the state to close loss-making SOEs. This unwillingness resulted in the SOEs operating under the soft budget constraint.

In short, SOEs have "a thirst for investment" because they could socialize their losses through new bank loans, and privatise the profits through accounting shenanigans.

Furthermore, every application for investment loan has a good justification. A profitable SOE's application is justified by the opportunity to make more profits for the state. And a loss-making SOE's application for new investment loans is justified by the need to improve its competitiveness through technical upgrading or to develop new product lines.

However, this "thirst for investment" by SOEs can result in inflation only when it is quenched by investment funds, and the fact is that decentralization reforms have allowed the SOBs to accommodate these higher loan demands – hence the term "liquidity tango". The SOBs began playing a more important role in 1983 when the state stopped providing circulating capital to the SOEs and gave this function to the SOBs. At the same time, SOBs were allowed to make long-term investment loans. (The budget continued to be a source of investment funds, albeit decreasing in importance over time.) The big institutional change occurred in 1984 when the SOBs were granted greater autonomy in their loan decisions. However, the administrative structure of the financial system has been even slower to change. The local branches the SOBs are required to promote the development of the local economy and subordinate themselves to the guidance of the local government. The staff of the bank branches depend on the local

government for housing allocation and medical and social services, and it is common for a the manager of the local branch to be appointed on the local government's recommendation.

Although the system of credit quotas set by the central financial authority was left intact by the decentralisation reforms, the local banks after 1984 faced greater financial incentives and greater political pressures to expand credit beyond their quotas. The greater incentives followed from the fact that the personal incomes of the local banks had become more dependent on the volume of their lending. The greater pressures from the local governments came not only because their tax revenues have become more dependent on the prosperity of the local economy, but also because they were often co-investors in the local SOEs.

This confluence of self-interest and external pressures resulted in many SOBs not only ignoring the credit quotas when they had excess reserves but also resorting to ingenious ways to "squeeze" more reserves from the central bank. A common method was to lend to local enterprises the funds designated for projects in the central plan. When a centrally-directed project began to draw on its centrally-allocated credits, the local bank would present the central bank with the dilemma of supporting or stopping the fulfillment of the central plan. Since many banks were doing this, the central bank (until about 1995) usually opted for accommodation rather than closure. It is this combination of actions by the local governments, SOEs and local banks that has raised aggregate demand continuously and caused inflation to be a constant threat in the 1984-1995 period.

The institutional reforms of the central bank and the state banks implemented in July 1993 as part of an austerity campaign have not been successful in changing things. Chen Yuan, then Deputy Governor of the central bank, reported in a 1995 conference that "the enthusiasm for economic growth in some localities is so strong that it is very difficult to stop completely

excessive investment financed through forced bank credit" (Chen, 1996, pp. 25, emphasis added).

It should be noted that this tendency to create credit excessively is also a tendency to increase the amount of nonperforming loans (NPLs) quickly. The counterpart of the embezzlement of profits in the SOEs is the growth of NPLs in the SOBs. Ultimately, the price of the liquidity tango is more than just inflation, it also includes a public-to-private transfer because of the need to recapitalise the SOBs periodically.

Suspending the Liquidity Tango: Deflation and Current Account Surpluses in 1997-2003

When GDP growth jumped from 3.8 percent in 1990 to 14.2 percent in 1992 with no signs of a growth slowdown in 1993, it was clear to policymakers that China was experiencing serious overheating and that much higher inflation would soon appear. In mid-1993, Vice-Premier Zhu Rongji was put in charge of restoring macroeconomic balance.

Stopping the SOE-SOB liquidity tango was not an easy task. Banks were still exceeding their credit quotas in 1995; growth and inflation in that year were 10.5 percent and 14.8 percent respectively. Zhu Rongji then started removing top bank officials whenever their banks over-lent or allowed the proportion of nonperforming loans (NPLs) to increase too rapidly. He also resorted to public berating of high provincial officials who did not (or could not) slow down investment growth. The rest, as they say, is history. In 1996, GDP growth was down to 9.6 percent, and RPI inflation was down to 6.1 percent. Zhu Rongji might not go down into history as a popular administrator, but he will be credited for stopping the liquidity tango during his term of office.

Zhu persisted in his austerity program, and RPI inflation was pushed down to 0.8 percent in 1997, and -2.6 percent in 1998 – causing deflation returned to China for the first time since 1972. At a superficial level, the systemic deflationary pressures that plagued China in 1997-2003 had their sources in, one, a shrinking money multiplier (a phenomenon that many Chinese economists have called "the liquidity trap"), and, two, a slowing down in the growth of consumption (a phenomenon commonly known as "the paradox of thrift"). The saving rate has gone from almost 20 percent of GDP in 1981 to 30 percent in 1988, and then to 40 percent in 2002.

At a deeper level, however, both of these phenomena, we suggest, spring from the same cause, which is the absence of adequate financial intermediation in China. The liquidity trap made its appearance in the mid-1990s when Zhu Rongji decreed the removal of the state bank manager if the ratio of non-performing loans in her bank were to go up two years consecutively. As the majority of state enterprises were either in the red or just breaking even, the banks became unwilling to lend money to the state-owned enterprises. Lending more to private enterprises was not really a good option because, one, their legal status was lower than that of state enterprises, and, two, there was no reliable way to assess their balance sheets. The only activity that the banks were happy to allocate their funds to is the purchase of state bonds, i.e. the financing of the government's deficit.

There are thus two ways to eliminate of the liquidity trap. The first way is to allow the liquidity tango to continue. The SOEs' "hunger for investment" will surely use up all of the domestic savings. The second way is to get the financial intermediation mechanism to work by removing the legal discrimination against lending to the private sector, and by establishing uniform accounting and auditing standards that have credible enforcement mechanisms.

In discussions on the rise of the savings rate, a common view is that the rise reflects the uncertainty about the future that many SOE workers feel in the face of widespread privatisation of loss-making SOEs. We find this explanation to be grossly incomplete because there has also been a rise in the rural saving rate even though rural residents have little to fear about the loss of jobs in the state-enterprise sector because none of them are employed there. Based on the work of Liu and Woo (1994) on savings behavior, we conjecture that the desire to invest is an important reason for why the rural sector has increased its savings rate. The most dynamic industrial expansion in China in the 1984-1994 period occurred in the rural areas. Since non-state firms in the rural areas cannot borrow from the bank, the only way they could establish themselves was through self-financing, which required the would-be entrepreneurs to save first. In the very first phase of rural industrialization, the amount of capital that was needed to start a factory workshop was very low. After a decade of rapid industrial growth, the Chinese countryside is saturated with labor-intensive enterprises. As competition among rural enterprises is very fierce at the present, it no longer makes economic sense to invest and open the same type of factory workshop. Rural enterprises must therefore move up to the next stage of value added production in order to be more profitable. This new generation of rural enterprises is much more capital-intensive, and thus requires a much larger amount of startup funds. And rural residents have responded to the higher capital requirements by increasing their saving rates.

Since the phenomenon of investment-motivated saving must also be present within the Chinese urban community the usual pessimism-based explanation for the rise in the urban saving rate is only partially correct. In fact, with the steady relaxation of regulations against the establishment of private businesses in the rural and urban areas, the amount of investment-motivated savings in China could only have risen more. To skeptics of our investment-

motivated savings hypothesis, we want to point out that Jeffrey Williamson (1988), an economic historian, has summed up the historical record of Western Europe and North America as showing that "investment demand seems to have been the driving force behind private saving and accumulation, past and present."⁹

Table 3 reports the investment trends in China in the post-1978 era. Total fixed investment has increased secularly as a proportion of GDP: an annual average of 28.8 percent in 1984-1988, 34.0 percent in 1992-1996, and 37.2 percent in 1997-2002. SOE investment went up in the 1992-96 period (19.8 percent) and then returned to the initial 1984-88 level (18.7 percent).¹⁰ Contrary to the secular rise in total investment and the likely secular rise in state-directed investment, rural investment has fallen secularly from 8.2 percent in 1984-88, to 7.7 percent in 1992-96, and then to 7.6 percent in 1997-2002. Our hypothesis is that a major reason for the decline in the rural investment ratio is that the traditional labor-intensive factory is no longer profitable, and rural entrepreneurs have been unable to borrow the money to undertake the more capital-intensive investments required for the next generation of rural enterprises.¹¹

We now turn to show that another outcome of inadequate financial intermediation is a chronic current account surplus. To see this point, consider the following accounting relationship:¹²

$$(\text{current account surplus}) = (\text{government budget surplus})$$

⁹ See Liu and Woo (1994) and Woo and Liu (1995) for a formal model of investment-motivated savings, and for empirical confirmation of this hypothesis.

¹⁰ We are of the opinion, however, that the amount of state-directed investment in the 1997-2002 period could be more than three percentage points higher than 18.7 percent of GDP because many of the big SOEs of 1988 had by 1999 converted themselves (or components of themselves) to share-holding companies listed on the stock exchanges – while remaining state-controlled. Furthermore, many SOEs have formed joint-venture firms with domestic and foreign companies, with themselves as the controlling shareholders.

¹¹ Woo (2000) presents a proposal of how to meet the investment financing needs in rural China.

¹² It is important to note that the above equation applies only to China's total trade surplus not to any bilateral trade surplus between China and that country. The equation in standard textbook notation is:

$$CA = (T-G) + (S-I)$$

- + (savings of SOEs – investments by SOEs)
- + (savings of the non-state sector – investments of the non-state sector)

China's proclivity to generate persistent current account surpluses has managed to manifest itself only after 1994 because of major policy changes implemented in that year. Before 1994, with the government budget deficit being usually small, the voracious absorption of bank loans by SOEs to invest recklessly kept the current account usually negative. When Zhu Rongji implemented stricter controls on the SOBs from 1994 onward, the lower growth rate in SOE investments allowed China's built-in propensity toward current account surplus to manifest itself only from 1995 onward. The pronounced tendency toward higher current account surpluses is mainly caused by the secular rise in the savings of the nonstate sector for the reasons we identified earlier, e.g. secular rise in the required amount of startup capital, secular improvement in the official attitude toward market capitalism.¹³ With the SOEs' "thirst for investment" curbed, the residual excess savings leaked abroad in the form of the trade surplus. Inadequate financial intermediation had made China a capital exporting country!

This perverse current account outcome is not new. Taiwan had exactly this problem up to the mid-1980s when all Taiwanese banks were state-owned and were operated according to the civil service regulation that the loan officer had to repay any bad loan that he had approved. The result was a massive failure in financial intermediation that caused Taiwan's current account surplus to be 21 percent of GDP in 1986. The reason why China has not been producing the gargantuan current account surpluses seen in Taiwan in the mid-1980s is because of its record budget deficit and the still excessive amount of SOE investments.

¹³ Of course, just as the current account outcome is the product of the three terms in the equation, multi-variable causation also applies to the savings outcome, e.g. demographic features, expected future income growth. Our discussion has concentrated on how one of these variables, the type of financial intermediation mechanism, can affect the savings rate.

Obviously, increasing budget deficits and SOE investments to counter deflation and reduce the trade surplus can only be a satisfactory solution in the short-run. In the long-run, the increased public investments could follow an increasingly rent-seeking path that is wasteful as in Japan (e.g building a 2nd big bridge to a lowly-populated island to benefit a politically-connected construction company), and the increased SOE investments could convert themselves into nonperforming loans at the SOBs. The right solution to the problem of excess saving is not for the government to absorb it by increasing its budget deficit but to establish an improved mechanism for coordinating private savings and private investments. This solution is correct regardless of the veracity of our hypothesis about investment-motivated savings. We will argue later in the paper that the formation of domestic private banks, and the entry of foreign banks will correct the problem of inadequate financial intermediation, and eradicate the deflationary tendencies created by the liquidity trap and the paradox of thrift. The fact is that the present banking system is a sinkhole, a situation that we now turn to examine.

China's Banking System: What is to be done?

In 1997-1998, the government injected new capital into China's banks and transferred a large proportion of the NPLs to the state-owned asset management corporations (AMCs). These actions raised the capital adequacy ratio (CAR) of the four largest SOBs from 4.4 percent at the end of 1996 to over 8 percent at the end of 1998, see Table 4. However, the rapid appearance of new NPLs after 1998 has lowered the average capital adequacy ratio of the four largest SOBs to 5.0 percent by the beginning of 2002.¹⁴ The banking reform efforts of the past several years have failed, and the state banks are now in need of another round of recapitalization.¹⁵

¹⁴ It is unlikely that the additional post-1998 NPLs were created entirely by new post-1998 loans turning bad, we suspect that a large proportion of them represented pre-1999 NPLs that were not recognised as

In this situation of a fragile banking system, China has committed itself to opening up the banking system completely within five years of joining the World Trade Organisation (WTO), which it did in December 2001. Foreign banks could conduct transactions in foreign currencies from the beginning of WTO membership, conduct transactions with the local corporate sector in Renminbi after two years, and conduct transactions with local households in local currencies after five years. Although foreign banks are likely to compete only in the coastal cities, at least in the initial period, the pressure on domestic banks can be high as the big four banks extract about 95 percent of their profits from about half a dozen coastal cities (Shanghai, Beijing, Xiamen, Shenzhen, Guangzhou, and Tianjin). Because there is no depositor insurance in China, the obvious question is whether depositors will believe that these foreign banks will drive the SOBs into open bankruptcy, and hence rush to withdraw their savings from the SOBs, setting in motion the vicious downward spiral of credit contraction, leading to business failures, rendering sound financial institutions insolvent, and contracting credit further.

Our reading is that even if pressures on the state banks do occur through depositor withdrawals, there is unlikely to be a full-blown crisis because the central bank will be able to issue currency to the state banks to meet the withdrawals. This expansion of high power money cannot be easily translated into a loss of foreign reserves because capital controls, which we support, remain in place and are likely to do so for the foreseeable future. The resulting expansion of high power money will also not have much impact on inflation because this is mainly a shift out of bank deposits into cash, or from some banks to others, and not a shift into

such in order to hide the seriousness of the problem at the time of the 1997-98 recapitalization.

¹⁵ It should be remembered that the major portion of the NPLs transferred to the AMCs in 1997-1998 still needs to be disposed and is thus still the responsibility of the People's Bank of China or the Ministry of Finance. It appears that the AMCs have started by concentrating on the "NPLs with the best prospect for recovery", and that the "average cash-recovery rate" on the small amount processed by June 2002 is 21 percent. This recovery rate is expected to drop substantially when the more difficult loans are processed. See "On the Road to Ruin," *Far Eastern Economic Review*, 14 November 2002.

goods. In fact, in the present deflationary atmosphere, a run from bank deposits to goods is a macroeconomically stabilising development! Simply put, the government has the technical ability to accommodate shifts in bank deposit preferences, even a modest bank run, without risking exchange rate collapse or a runaway inflation.

One could therefore argue, as Fan (2003) has, that if the Chinese government decides to keep the SOBs as the dominant financial intermediation mechanism, then the SOBs should not be re-capitalized again. The effective way to slow down the pace of NPL creation in an SOB-dominated financial system and keep the fiscal situation sustainable is to keep the NPLs on the books of the SOBs, with "the financial status of these loans .. constantly watched and openly discussed" in the public media. We think, however, that Fan Gang's solution can be a medium-term solution at best. In our assessment, China's WTO accession has made recapitalisation of the SOBs inevitable in the coming decade. This is because the large amount of NPLs in the SOBs means that they have much higher operating costs than the foreign banks. SOBs have to pay interest on the deposits that are the counterparts of the bad loans, whereas all of the loans of the foreign banks (at least in the beginning) will be serviced. With the foreign banks being able to afford to pay higher deposit rates and to charge lower lending rates, the demise of the SOBs seems assured unless their NPL burden is removed.

To put more clearly the above point that NPLs raise the lending rate, we note that the cash-flow constraint that a bank (regardless of solvency) must meet in the absence of state subsidies, of operating costs, and of a required reserve requirement is given by:

$$r_D D = r_L [D - \text{NPL}]$$

where r_D = deposit rate,

r_L = lending rate, and

D = amount of deposit.

This means that if NPLs equal one-third of deposits, then the lending rate has to be at least 50 percent higher than the deposit rate, i.e. if r_D is 4 percent, then r_L has to be at least 6 percent.

Since a new bank (domestic or foreign) will not have any NPLs, it can offer higher deposit rate and a lower lending rate (say $r_D = 4.2$ percent, and $r_L = 5.8$) than the SOBs, and thence steal both the deposit and lending businesses of the SOBs.

In order for Fan Gang's suggestion of no recapitalization to work at all, it is necessary that the foreign banks (which will no longer face more restrictions than Chinese banks by 2008), for some reasons, will not expand aggressively out of the big coastal cities to blanket the rest of the country with branches in a short period of time. Our guess is that Fan Gang's method can work for about seven to ten years because we think that only HSBC and Citibank are likely to actively expand their banking network in China in the next decade, and even then mostly in the major coastal provinces.

The most important priority for financial sector reform is the appearance and growth of competitive domestic private banks. As China is required by its WTO accession agreement to allow foreign banks to compete against its SOBs on an equal basis by 2007, it would be akin to self-loathing not to allow the formation of truly private banks of domestic origin. There is no reason to favor foreign private banks over domestic private banks, and no reason why China should not allow its best financial minds compete with, and achieve the same glorious success of, the best foreign financial minds. We therefore recommend that, right after the recapitalisation of the big four state banks, at least two of them be broken into several regional banks, and that the majority of these regional banks be privatized.¹⁶ At the same time, the laws on the establishment

¹⁶ Partial recapitalisation has been proceeding since mid-2003, and it is likely that the target would be the reduction of the NPL ratio from 35 percent to 15 percent. The cost is estimated to be range from 700

of new banks should be loosened, and interest rates be deregulated. However, it is most crucial that financial sector liberalization proceeds no faster than the development of the financial regulatory ability of the state. Even then, the danger of substituting financial crash for financial repression is still a real one. A modern financial system requires a modern system of financial supervision and prudential regulation for its proper functioning.

It would be a good idea to sell a few of the regional state banks to foreign banks. This will facilitate the transfer of modern banking technology to Chinese banks. The more local staff the foreign bankers train, the larger is the pool of future managers for Chinese-owned banks. An accelerated process of promoting the growth of sound domestic private financial institutions and allowing the entry of foreign financial institutions would certainly shorten the time it would take for Shanghai to assume its rightful place among the major international financial centers, and to contribute to more efficient intermediation of the world's savings.

We should mention that entry of Western banks into China's financial markets is not the same thing as liberalization of the capital account in the balance of payments. We do not believe that China would be well served by a rapid opening of the capital account, since that could subject China to rapid swings of short-term capital in the same manner that has whipsawed the economies of Southeast Asia and Latin America. Just as in financial market liberalization, capital account opening should also proceed gradually and in stages, because it must be accompanied by sophisticated financial market regulation, something that is clearly not in place at this time. The fact is that foreign banks could suddenly become conduits for large-scale capital flight, or for rapid swings in short-term lending and repayments, or facilitators of bank

million yuan to 1 trillion yuan (7 to 10 percent of GDP) – see "Massive bailout proposed for banks," *South China Morning Post*, 26 August 2003.

runs (in which depositors do not merely switch banks, or switch from domestic banks to domestic currency, but actually switch from domestic deposits to foreign assets).

Undermining the State's Fiscal Position

Since the government had recapitalised the banks in 1998, and needs to do so again now, the important question is how many more rounds of bank recapitalization can China afford without generating a fiscal crisis? The simple fact is that fiscal sustainability lies at the heart of whether a banking crisis would actually occur. As long as the state is perceived to be able and willing to bail out the SOBs, depositors would retain their confidence in the SOBs regardless of the actual state of their balance sheets.

The stock of publicly-acknowledged government debt comes to only 16 percent of GDP, and so it is usual to hear official assurances that the current fiscal deficits of less than 3 percent of GDP do not pose a problem for debt servicing by the state. However, the analytically correct measure of public debt is the consolidated debt of the state sector, which would include at least some part of the contingent liabilities (e.g., foreign debts of SOEs and SOBs, and unfunded pension schemes in the SOE sector) that the state might have to assume responsibility for when the state-owned units default on their financial obligations. We should note that if an analyst counts NPLs as contingent liabilities, then she is really computing what the public debt will be after one more round of bank recapitalization, i.e. the second bank recapitalization since 1996. According to Fan (2003), the consolidated public debt at the end of 2001 was 72 percent of GDP; and according to Citibank (2002), it could be as high as 115 percent. So is China's present debt-GDP ratio too low or too high?

To answer this question, we note that the central government debt-GDP ratios in Italy, Sweden and the United States were, respectively, 117.6 percent, 70.8 percent, and 50.5 percent in 1995.¹⁷ So if China undertakes its second bank recapitalization since 1997, its public debt will still be within the range seen in advanced OECD countries that are not experiencing fiscal crises. However, there are two important points to be made to show that this finding is not an optimistic one.

First, the forthcoming recapitalization of China's banks appears to be the last *major* one that the government could implement in the short-term without risking the stability of the domestic financial markets and its credit standing in the international financial markets. A third recapitalization (since 1997) will push the debt-GDP ratio to over 150 percent, well above the OECD norm.

Second, if China recapitalizes the SOBs a second time, then it will have to compromise the expansionary fiscal policy that has been keeping GDP growth above 7 percent since 1997. This is because China raises much less state revenue, as a share of GDP, than the OECD countries, and hence has a much lower capacity to service its public debt. The revenue-GDP ratio was 16.2 percent for China in 2001, 30 percent for Italy in 1995, 38 percent for Sweden in 1995, and 21 percent for the U.S. in 1996.¹⁸ The additional debt service from the second bank recapitalization will be about 1.5 to 2.5 percent of GDP.¹⁹ If China increases tax collection or reduces infrastructure spending to cover this increased debt service, then this second recapitalization of the SOBs will reduce the fiscal stimulus that has been keeping the GDP growth rate above 7 percent. Between these two options, expenditure reduction cannot be

¹⁷ The US ratio is for 1996. Ratios were constructed from the IMF's International Financial Statistics.

¹⁸ The revenue-GDP ratio for China is from Deutsche Bank (2002) which estimated that it will rise to 16.4 percent in 2002 and 16.6 percent in 2003. Debt to GDP and revenue-GDP ratios for other countries are from the IMF database.

¹⁹ This assumes a real bond rate of 4 to 6 percent.

considered the less likely outcome because China's experience in the reform era is that frequent changes to the tax system have not been able to raise revenue significantly for a sustained period. The reason for the low revenue-GDP ratio could be because increasing tax collection is as much a political challenge as it is an administrative challenge.

If the issue of fiscal sustainability is viewed from the broader picture of debt dynamics, one might be tempted to be more optimistic about the present situation, and dismiss the existence of a tradeoff between bank recapitalisation and fiscal stimulus as stated in the preceding paragraph. Such an optimistic assessment would be based on the fact that China's annual trend growth in the next decade and a half is likely to be at least 7 percent, and so the high debt-GDP ratio of 115 percent of today would be reduced over time by the high rate of output growth. There is, thus, no need to cut back on the fiscal stimulus in order to service the additional debt from the new round of bank recapitalisation, China could just borrow more to cover the additional debt service, and wait for the economy to "grow" out of its debt.

To state the above argument more formally, the optimism is based on the evolution of the debt-GDP ratio as given by:

$$d(\ln[\text{Debt}/\text{GDP}]) / dt = r + [\text{GDP}/\text{Debt}] \cdot [p + b] - y \quad \text{where}$$

r = real interest rate on government debt

p = primary fiscal deficit rate

$$= [\text{state expenditure excluding debt service} - \text{state revenue}] / \text{GDP}$$

b = NPL creation rate

$$= [\text{change in NPL in SOBs}] / \text{GDP}$$

y = trend growth rate of real GDP

For the *optimistic scenario*, we assume y to be 8 percent, p to be 2 percent, and r to be 4 percent.²⁰ The fact that China must now undertake another recapitalisation after 1998 to get rid of NPLs worth about 35 percent of GDP suggests that b has been about 6 percent.

The fact is that as long as $y > r$, then the Debt/GDP ratio will have a steady state value when sum of $(p+b) > 0$. Specifically,

$$(\text{Debt/GDP})_{\text{steady-state}} = (p+b)/(y-r)$$

$$(\text{Debt/GDP})_{\text{steady-state}} = 200 \text{ percent when } b = 6 \text{ percent}$$

$$(\text{Debt/GDP})_{\text{steady-state}} = 125 \text{ percent when } b = 3 \text{ percent}$$

$$(\text{Debt/GDP})_{\text{steady-state}} = 50 \text{ percent when } b = 0 \text{ percent}$$

The point is that even when we assume that the rate of NPL creation will be halved to 3 percent of GDP, the resulting $(\text{Debt/GDP})_{\text{steady-state}}$ is 125 percent, which is double what the European Union has set as the target for its members.

However, the reason why $r = 4$ percent is because the interest rate has been regulated. We will now assume that the implementation of financial deregulation that is necessary for normal healthy development of the financial sector will render $r = 6$ percent.²¹ Then we get:

$$(\text{Debt/GDP})_{\text{steady-state}} = 400 \text{ percent when } b = 6 \text{ percent}$$

$$(\text{Debt/GDP})_{\text{steady-state}} = 250 \text{ percent when } b = 3 \text{ percent}$$

$$(\text{Debt/GDP})_{\text{steady-state}} = 100 \text{ percent when } b = 0 \text{ percent}$$

The noteworthy finding from the above two sets of estimates is that present economic policies in China will produce a level of $(\text{Debt/GDP})_{\text{steady-state}}$ that is unprecedented by

²⁰ According to Citigroup (2002) and Fan (2003), the Debt/GDP ratio before the forthcoming recapitalisation is 68 percent and 31 percent respectively. According to Deutsche Bank (2003), p was 1.8 percent in 2001 and 2.2 percent in 2002, and is likely to be 2.1 percent in 2003. The estimate of the real interest rate (r) is obtained by combining the facts that the government bond rate on 25 March 2003 was 2.65 percent, and that the inflation rate was about negative 1 percent.

²¹ According to Solow (1991), the stylised fact for the real interest rate in the United States is that it is 5 to 6 percent.

international experience despite the optimistic assumption that long-run growth rate is 8 percent. We therefore think that present economic policies are fiscally unsustainable even though there is a theoretical steady-state for the Debt/GDP ratio – which means that the next bank recapitalisation will have to be followed by at least partial privatisation of some of the SOBs.

In summary, China's consolidated debt-GDP ratio will be relatively high by international standards after a second bank recapitalization, while its revenue-GDP ratio will remain relatively low. The greatest threat to the stability of China's financial market is fiscal sustainability, and the biggest threat to fiscal sustainability is successive rounds of bank recapitalization. This precarious outcome is a systemic feature of the current banking system, a relic from the era where central planning was the preferred engine of economic growth. Of course, we cannot attribute the creation of NPLs entirely to the SOBs, their chief customers, the SOEs, deserve an equal share of the blame. The fact is that without solving the SOE problem, the problem of NPLs cannot be solved.

The Return of Inflation?

A change in the macroeconomic situation appeared to have occurred near the end of 2002, which coincided with the impending transfer of political leadership from Jiang Zemin and Zhu Rongji to Hu Jintao and Wen Jiabao. Monthly investments in fixed assets, which had grown (on a year-to-year basis, y-o-y) mostly below 20 percent during 1996-2001 and mostly below 25 percent in 2003, jumped to 33 percent in January 2003 and stayed at about that growth rate for the rest of 2003. The positive CPI inflation rate (y-o-y) in January 2003 also turned out to be the beginning of a new trend. CPI inflation went from -0.4 percent in December 2002 to 0.4 percent

in January 2004, to 3.2 percent in January 2004, and then to 5.3 percent in July 2004. By July 2003, some observers were pronouncing China to be overheating.²²

It is not clear how long the liquidity tango that restarted in late 2002 would be allowed to continue. One could at this point still make the optimistic case that the 2003-2004 spurt in investment was due to the coincidence of four temporary factors:

1. a temporary loosening to generate a boom during the leadership transition;
2. a one-time stimulus to offset the deflationary effects of Severe Acute Respiratory Syndrome (SARS) that broke out in the first half of 2003;
3. a diversion of foreign direct investment from Southeast Asia to China because China's WTO accession in 2002 guaranteed China's access to its export markets; and
4. a concerted effort by the SOBs, on the eve of being listed in on the stock exchange, to lower their NPL ratios by expanding the volume of total loans.

By the third quarter of 2003, it became clear that inflation has replaced deflation, and the People's Bank of China (PBC) announced on August 23 that the required reserve ratio for commercial banks and most other deposit-taking financial institutions would be raised from 6 percent to 7 percent with effect from September 21.²³ At the same time, the state started implementing administrative measures like the closing down of investment projects like unauthorised development zones.²⁴ The economy, however, continued to surge ahead causing prices of industrial inputs to soar, and power shortages to worsen.²⁵

On March 25, 2004 PBC raised "the base rate for re-lending among financial institutions by 0.63 percentage points ... [and later in] April, the State Council issued an order that reduced

²² Fan Gang "Is the Economy Overheating," *International Finance News*, July 31, 2003.

²³ "China Moves to Tighten Bank Credit," *New York Times*, August 26, 2003.

²⁴ "2,400 development zones closed," *South China Morning Post*, December 29, 2003.

²⁵ "China's Dark Days and Nights: Industrial Growth Exceeds Supply of Electrical Power," *Washington Post*, January 5, 2004

the maximum loan percentage for steel, aluminium, cement and property investments to 60 per cent from 75 per cent."²⁶ Then on April 25, 2004 PBC raised the required reserve ratio again, this time to 7.25 percent. This further caused most analysts to see a soft landing for the economy. For example, on August 12, 2004 Ma Jun, the well-known Deutsche Bank analyst, revised his forecast for 2004 growth downward to 9.0 percent from 9.2 percent (forecast issued on July 24, 2004).

Although official GDP growth was 9.1 percent in 2004:3Q compared to 9.6 percent in 2004:2Q, there was an unexpected re-acceleration of economic activities (especially investment spending) in September that reignited fears of overheating. "The new Goldman Sachs China Activity Index .. shows that the economy accelerated modestly to 12.5% [in September] from 11.9% [in August]."²⁷ The result was that, on October 14, 2004, Ma Jun raised his forecast for output growth in 2004 to 9.4 percent.

This perception of an economy on the verge of an inflationary spurt was also shared by PBC because it raised interest rates on October 28, 2004 for the first time in nine years. The 1-year deposit rate and the 1-year base lending rate were both raised by 27 basis points to 2.25 percent and 5.58 percent respectively.²⁸ The *New York Times* reported a western financial analyst as hailing the October 2004 increase in interest rate as "a historic embrace of free-market tools of economic management increase." In our opinion, this pronouncement misses the basic point that free-market tools can work only in a free-market environment. The technical question about the effectiveness of using the interest rate to reduce the demand for loans is the economic question of whether China has the free-market environment where the SOEs are no longer

²⁶ "Central bank chief juggles hot economic potato," *South China Morning Post*, May 14, 2004.

²⁷ Goldman-Sachs, *Charting China*, Issue No: 04/09, August/September 2004

²⁸ PBC also removed the ceiling on loan rates to soften the reduction of credit on private businesses. On November 10, 2004 the PBC followed up on the tightening by raising the reserve requirements on commercial bank foreign exchange deposits to 3 percent.

operating under the soft budget constraint. The relevant question is the political question of whether the new political leadership is willing to impose hard budget constraints on the great number of loss-making large SOEs. In short, have there been enough institutional changes (e.g. adequate social safety nets, enhanced political legitimacy, improved social controls) that the government now has more ability than ten years ago to handle the social fallouts from economic restructuring?

Given the puny size of the interest rate increase, we find it hard to believe that the primary objective was to reduce loan demand. It is not plausible that the interest rate elasticity of loan demand has now switched from (the soft-budget-constraint-induced value of) zero to a high enough value that loans demands would fall significantly. An equally important objective might be to curb the withdrawal of deposits caused by the deposit rate of 1.98 percent being so much below the inflation rate of 5.2 percent. Any country with an insolvent banking system would be well advised to minimise the probability of a bank run occurring.²⁹

However, if the two objectives are to reduce loan demand and to prevent financial disintermediation of the SOBs, then why the puny increase in the interest rate? As the deposit rate is still way under the inflation, does this mean that there will be more interest rate increases in the near future?³⁰ We suspect that one important reason for the puny increase is because PBC is concerned that a bigger increase could trigger a large inflow of funds that would force the revaluation of the yuan that it has been resisting. This hypothesis of a possibly overvalued

²⁹ One financial analyst has estimated that there was a more than 3 percent drop in bank deposits in October 2004 – see "Informal Lenders in China Pose Risks to Banking System," *New York Times*, November 9, 2004.

³⁰ This is Jun Ma's expectation when he wrote: "We view the rate hike (**and the expected future increases in the coming 12 months**) as a positive move towards achieving the goal of soft landing of the economy" (emphasis added) in *China: PBOC rate hike a positive move towards soft landing*, Deutsche Bank newsletter, 28 October 2004.

exchange rate constraining the use of the interest rate for macro-stabilization naturally leads us to the issue of exchange rate management.

The Hullabaloo over the Value of the Yuan

The fact that the various foreign demands for yuan appreciation were made at different points in time, and under different sets of economic circumstances certainly creates the impression that many foreign analysts believe that yuan appreciation is the cure for all occasions. Ever since the U.S. current account deficit started soaring upward with the enactment of the Bush tax cuts in 2001, the U.S. government has been getting progressively more strident in its demand for a yuan appreciation. This U.S. position on the yuan is self-serving because it ignores accountability for the outcome. It ignores the fundamental role that the mushrooming U.S. fiscal deficit is playing to widen the U.S. current account deficit. In short, the U.S. is asking for a yuan appreciation as the solution to a problem that it had created in the first place.

If a more objective assessment is made about the origins of the U.S. current account deficits and the appropriate cure for this U.S.-China “problem”, one would very likely reach the same conclusion as Ronald McKinnon did:

".... more Congressmen, pundits and voters feel justified in claiming that foreigners use unfair trade practices to steal US jobs, particularly in manufacturing, and hence in urging protectionism. The irony is that, if imports were somehow greatly reduced, this would prevent the transfer of foreign saving to the US and lead to a credit crunch, with a possibly even greater loss of US jobs.

"The answer is not tariffs, exchange rate changes or subsidies to manufacturing that further increase the fiscal deficit. The proper way of reducing protectionist pressure and relieving anxiety about US manufacturing is for the government to consolidate its finances and move deliberately towards running surpluses - in short, to eliminate the US economy's saving deficiency."³¹

³¹ Ronald McKinnon, “U.S. savings shortfall is hurting workers,” *Financial Times*, October 20, 2004.

As mentioned earlier, in December 2002, Harukiko Kuroda and Masahiro Kawai of Japan's Ministry of Finance, joined the U.S. call for a yuan revaluation on the new grounds that this action was needed to stop China from exporting its price deflation to the rest of the world. The fundamental problem with the Kuroda-Kawai recommendation is that it is impossible to blame Japan's deflation on China's deflation because the timing is all wrong. Japan's deflation started with the bursting of the stock market-cum-real estate bubble in 1992, and China's deflation started only in 1998.³² It would just be absurd to argue that Japanese manufacturers started lowering prices in 1992 in anticipation of the Chinese deflation that would appear in 1998.

How about the validity of the lesser charge that economic spillovers from China might have worsened the ongoing Japanese deflation? The answer is, if anything, the opposite appeared to have happened instead! According to growth decomposition, China has actually turned out to have been in a positive force for Japan's economic recovery!

"By some estimates, Japan's exports to China and capital spending linked to its export industries accounted for one-third of Japan's total GDP growth last year. Indeed, a slowdown in China would expose the chronic weakness of private consumption in Asia. The recent burst in growth in the region has been much too dependent on exports to China. Although Japan's GDP grew at an annual rate of 4.5% in the second half of 2003, consumer spending rose by only 1%."³³

While the bases of the demands for yuan devaluation by the United States and Japan are self-serving and incorrect, their demands do raise some fundamental questions in international economic diplomacy. What should be the international division of responsibilities in addressing global balance of payments adjustment? Should there be international coordination on yuan appreciation, fiscal deficit reduction in the United States, and a faster pace of financial sector

³² This statement is based on the behavior of Japan's WPI, and on China's retail price index and factory-gate price index of industrial products.

³³ "The great fall of China?" *The Economist*, May 13th 2004.

reform in Japan? Furthermore, how should China balance between its international responsibility of doing what's good for the rest of the world and its internal responsibility of doing what's good for itself? Clearly, although China has not broken any international law governing international economic interaction, China cannot simply ignore these self-serving and incorrect demands because these countries might then implement actions that could harm China's welfare more than if China were to reduce the balance of payments surpluses through means of its own choosing. In short, economic reasoning might identify who should bear the cost of adjustment according to accountability, but, in the end, it could well be the distribution of economic power that finally determines the actual allocation of adjustment costs across countries.

Nine months after the Kuroda-Kawai call's for yuan appreciation, the macroeconomic situation in China had changed from deflation to the cusp of overheating. In this atmosphere of potential overheating, Morris Goldstein and Nicholas Lardy of the International Institute for International Economics advised the Chinese government to immediately appreciate the yuan by 15 to 25 percent (presumably against the US\$).³⁴ This action was necessary to allow "the yuan to play its proper role in global balance of payments adjustment" and to reduce overheating by discouraging "speculative capital inflows" that increased the money supply. In short, yuan appreciation was depicted by Goldstein and Lardy as a win-win policy, an action that was good for both China and the rest of the world.³⁵

³⁴ Morris Goldstein and Nicholas Lardy, "Two-Stage Currency Reform For China," *Asian Wall Street Journal*, September 12, 2003. 1. They also made two other recommendations (a) switching from a US\$ peg to a currency basket (1/3 US\$, 1/3 Yen, 1/3 Euro) peg, and (b) introduction of a 5 to 7 percent trading bond around the new currency basket peg.

³⁵ A year later, their colleague, Marcus Noland ("Don't Push China Too Hard," *Far Eastern Economic Review*, October 21, 2004) repeated their policy recommendation to China on the ground that "revaluing the renminbi ..[will be] for its good, and ...[will] ease the adjustment of its neighbours in Asia."

Our reservation about the Goldstein-Lardy recommendation is that there are alternate combinations of macroeconomic policies that will produce results superior to the one generated by appreciating the yuan alone. The general point is that because the balance of payments is only one of the main outcomes of concern and the exchange rate is only one of the ways to affect the balance of payments, it is seldom optimum to concentrate exclusively on one policy target (which does not dominate the other policy targets in importance) and then to employ only one particular policy tool (which is chosen idiosyncratically) to achieve that one policy target. We also want to point out here that speculative inflows into China cannot expand the money supply without the agreement of the People's Bank of China (PBC). Goldstein and Lardy are remiss in that, besides sterilization through open-market operations, PBC can also impose credit quotas on the banks, and/or use existing capital controls to stem the speculative capital inflows.

The correct way to think about exchange rate management is to analyse the issue within the context of overall macroeconomic management and not just in regard to its impact on the balance of payment.

Our analyses in the preceding sections have established that whenever the hard budget constraint is imposed on the SOEs, China's dysfunctional financial system would impart a deflationary bias to the economy and render China a capital exporting country by constraining the growth of aggregate demand to be less than the growth of aggregate supply. Prior to 2003, the government had actively sought to neutralise deflation through an aggressive fiscal policy. We recommend that the new leadership should continue the hard budget policy toward the SOE sector, and seek to reduce the resulting current account surplus in the medium-run by:

- reshuffling and slightly expanding the state investment program to incorporate large import-intensive infrastructure projects; and

- accelerating the implementation of the tariff reductions contained in the WTO accession agreement.

It needs to be emphasized that the most efficient solution for macroeconomic and external balance management in the long-run is to have private investment rather than public investment to recycle the pool of private savings back into the economy. The key to eradicating the deflation bias in a hard budget constraint environment, and the tendency toward current account surplus lies primarily in establishing an efficient financial intermediation mechanism and not in appreciation of the yuan.

Conclusion

We conclude with three final observations.

First, frequent bank recapitalization is the biggest threat to China's fiscal solvency. The forthcoming second recapitalization of SOBs since 1996 is the last one that China can afford. Because fiscal solvency requires that the state keeps interest rates low through regulation in order to contain the cost of debt service, China faces a difficult tradeoff between the maintenance of fiscal stimulus to keep growth on track and the promotion of financial market development via bank recapitalization and interest rate deregulation.

Second, it is important to manipulate aggregate demand via monetary-fiscal policies to keep the actual growth rate close to the natural growth rate, China is in the fortunate position where it can implement other economic policies that will increase the natural growth rate. To use a production analogy, the biggest gain comes not only from keeping an engine running at peak efficiency but also from having the engine with the largest capacity. In short, the most important economic task for China is to adopt the best economic growth engine that world

economic history has identified: a market economy where competitive private enterprises constitute the norm, and where the state focuses mainly on the provision of public goods and social insurance. The switch to the new growth engine necessitates that China continues the privatization of nondefense-related state enterprises that are not natural monopolies, begins the privatisation of SOBs, and reduces drastically the legal discrimination against the private sector.

Third, the widespread international attention on the value of the yuan is possibly the first time in international monetary history that the value of the currency of a developing country has so greatly exercised the finance ministries and central banks of the largest developed countries for such a sustained period. This anomalous situation reveals two noteworthy points about China's return to the international stage. One, it shows the significant economic impact that China is now already having on the world. Two, it portends that the anticipated continued fast growth of China in the next two decades will not only force more structural adjustments in other countries but will also require that China assumes a broader "global system" perspective in resolving disputes caused by cross-border spillovers from its policies. The most contentious international disputes presently are about China's management of the exchange rate, trade regime, and patents' rights enforcement. However, as China continues to grow rapidly, there is the unfortunate possibility that the range of international disputes could expand, possibly in the medium term, to include international concerns about China's public health readiness, and environmental protection. Hopefully, the world would be more multilateral in its approach to the solution of these future common issues rather than insisting on a unilateral solution by China as in the present case of the yuan.

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Table 1: Output Growth and Inflation Performance in China, 1979-2003

	Gross Domestic Product (GDP) <u>(Rate of change, in percent)</u>	Retail Price Index (RPI) <u>(Rate of change, in percent)</u>	Consumer Price Index (CPI) <u>(Rate of change, in percent)</u>
1979	7.6	2.0	NA
1980	7.8	6.0	NA
1981	5.2	2.4	NA
1982	9.1	1.9	NA
1983	10.9	1.5	NA
1984	15.2	2.8	NA
1985	13.5	8.8	9.3
1986	8.8	6.0	6.5
1987	11.6	7.3	7.3
1988	11.3	18.5	18.8
1989	4.1	17.8	18.0
1990	3.8	2.1	3.1
1991	9.2	2.9	3.4
1992	14.2	5.4	6.4
1993	13.5	13.2	14.7
1994	12.6	21.7	24.1
1995	10.5	14.8	17.1
1996	9.6	6.1	8.3
1997	8.8	0.8	2.8
1998	7.8	-2.6	-0.8
1999	7.1	-3.0	-1.4
2000	8.0	-1.5	0.4
2001	7.3	-0.8	0.7
2002	8.0	-1.3	-0.8
2003	9.4	-0.1	1.2
average 1979-2003	9.40	5.31	NA
average 1979-1996	9.92	7.84	NA
average 1997-2003	8.06	-1.21	0.30
variance 1979-1996	11.239	42.412	NA
variance 1997-2003	0.641	1.777	2.078
t-statistic for difference in the means of 1979-1996 and 1997-2003	2.197	5.604	

Source: China Statistical Yearbook, 2001 and 2003 editions

Table 2: Employment in China's Industries, 1978-2002

	<u>Employment Level</u>		<u>Employment Share</u>		<u>Growth in Employment</u>	
	<u>Secondary Industry</u> (in millions)	<u>Manufacturing Sector</u>	<u>Secondary Industry</u> (percent of total employment)	<u>Manufacturing Sector</u>	<u>Secondary Industry</u> (percent per year)	<u>Manufacturing Sector</u>
1978	69.5	53.3	17.3	13.3		
1988	121.5	86.5	22.4	15.9	5.8*	5.0*
1989	119.8	85.5	21.6	15.4	-1.4	-1.2
1990	138.6	86.2	21.4	13.3	15.7	0.9
1991	140.2	88.4	21.4	13.5	1.1	2.5
1992	143.5	91.1	21.7	13.8	2.4	3.0
1993	149.6	93.0	22.4	13.9	4.2	2.1
1994	153.1	96.1	22.7	14.3	2.3	3.4
1995	156.5	98.0	23.0	14.4	2.2	2.0
1996	162.0	97.6	23.5	14.2	3.5	-0.4
1997	165.5	96.1	23.7	13.8	2.1	-1.5
1998	166.0	83.2	23.5	11.8	0.3	-13.5
1999	164.2	81.1	23.0	11.4	-1.1	-2.5
2000	162.2	80.4	22.5	11.2	-1.2	-0.8
2001	162.8	80.8	22.3	11.1	0.4	0.5
2002	157.8	83.1	21.4	11.3	-3.1	2.8
2003	160.8		21.6		1.9	

* Annual compound growth rate between 1978 and 1988

Source: China Statistical Yearbook, 1990 to 2001 data from 2003 edition, and earlier data from 2001 edition

Figure 1: Inflation Rate (y-o-y in percent)
according to Consumer Price Index (CPI) and Retail Price Index (RPI)

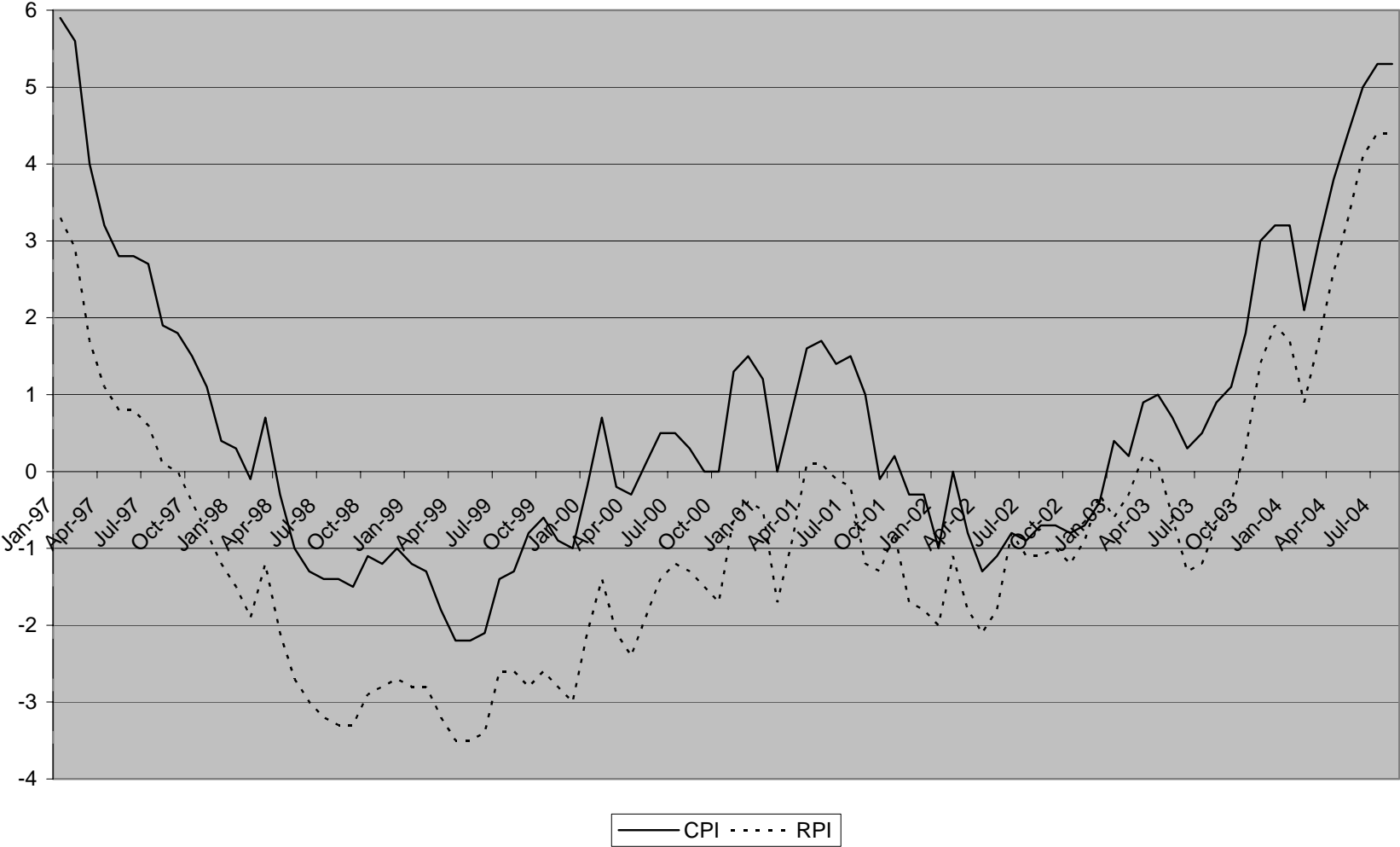


Table 3: Investment Trends by Ownership

investment as percent of GDP

investment refers to fixed asset investment

	<u>Total</u>	<u>Rural</u>	<u>SOE</u>
1981	19.8	5.1	13.7
1982	23.2	6.2	16.0
1983	24.1	7.0	16.0
1984	25.6	7.7	16.5
1985	28.4	7.6	18.7
1986	29.6	8.0	20.4
1987	30.4	8.9	19.2
1988	30.1	8.9	18.5
(June 4th Tian An Men Disruption, 1989-1991)			
1992	29.5	7.5	19.8
1993	36.0	8.0	22.1
1994	36.4	7.5	20.6
1995	34.2	7.5	18.6
1996	33.8	7.9	17.7
1997	33.5	7.7	17.6
1998	36.3	7.5	19.6
1999	36.4	7.5	19.4
2000	36.8	7.5	18.4
2001	39.0	7.6	18.5
2002	41.5	7.6	18.0
average 1984-1988	28.8	8.2	18.7
average 1992-1996	34.0	7.7	19.8
average 1997-2002	37.2	7.6	18.6

1984 was the year that the central government gave the clear signal that it had no ideological objection to the formation of rural enterprises

Rural = rural collectives and rural individuals

SOE = state-owned units only, does not include state-controlled units listed as under various types of joint-owned units (e.g. share-holding units, joint-venture units)

Source: China Statistics Yearbook, compiled from various annual editions

Table 4. Rising Fragility of China's Banking Sector

	End-1996	End-1998	Beginning-2002
Proportions of NPLs (%)			
Big four banks	40.0	48.0	35.0
Ten joint-stock banks	—	13.5	15.5
Average CAR (%)			
Big four banks	4.4	>8.0	5.0

Notes: NPLs: nonperforming loans; CAR: capital adequacy ratio. Proportion of non-performing loans for the four major banks for 1996 and 1998 are re-estimated based on new information made available at the beginning of 2001. The proportion for 2001 excluded the Rmb1.4 trillion transferred to the Asset Management Companies in the previous year.

Source: Citigroup estimates.