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China's Macroeconomic Imbalances: The Liquidity Tango Mechanism

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The post-1978 marketisation of China's economy has interacted with the continued state ownership to create an inflationary "liquidity tango" between the state-owned enterprises (SOEs) and the state-owned banks. Whenever the hard budget constraint is imposed on the SOEs, China's dysfunctional financial system imparts a deflationary bias to the economy and renders China a capital exporting country by constraining the growth of domestic demand. Foreign economic advisers recommend that China solve its internal and external imbalances by raising the interest rate and appreciating the exchange rate. However, the use of price mechanisms as the only instrument for all economic problems is not appropriate for China's transitional economy. Trade surpluses are better handled by establishing an efficient financial intermediation mechanism and by faster import liberalisation than by appreciation of the yuan; and investment expenditure of the SOEs is better curbed by administrative controls than by higher interest rates.

The year 2006 could well turn out to be a year of sizzling growth. The annualised real GDP growth rate, which hovered at 10 percent in the 2003-2005 period, climbed to 10.3 percent in the first quarter of 2006 and then to 11.3 percent in the second quarter of 2006 (see Table 1). These high growth rates were driven by record high investment spending and record export performance. Investment rose to over 45 percent of

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Table 1 The Boom-Bust Nature of China's Economy
(annual growth rates in percentages)

	Annual growth rate	Deviation from 9.7% average growth in 1979-2005 (percentage points)	Memo: Old GDP series, annual growth (average=9.4%)
1979	7.6	-2.1	7.6
1980	7.8	-1.9	7.8
1981	5.2	-4.5	5.2
1982	9.1	-0.6	9.1
1983	10.9	1.2	10.9
1984	15.2	5.5	15.2
1985	13.5	3.8	13.5
1986	8.8	-0.9	8.8
1987	11.6	1.9	11.6
1988	11.3	1.6	11.3
1989	4.1	-5.6	4.1
1990	3.8	-5.9	3.8
1991	9.2	-0.5	9.2
1992	14.2	4.5	14.2
1993	14.0	4.3	13.5
1994	13.1	3.4	12.6
1995	10.9	1.2	10.5
1996	10.0	0.3	9.6
1997	9.3	-0.4	8.8
1998	7.8	-1.9	7.8
1999	7.6	-2.1	7.1
2000	8.4	-1.3	8.0
2001	8.3	-1.4	7.5
2002	9.1	-0.6	8.3
2003	10.0	0.3	9.5
2004	10.1	0.4	9.5
2005	9.9	0.2	9.4
2005:1Q	9.9	0.2	
2005:2Q	10.1	0.4	
2005:3Q	9.8	0.1	
2005:4Q	9.9	0.2	
2006:1Q	10.3	0.6	
2006:2Q	11.3	1.6	

Note: GDP data from 1993-2006 are based on a new GDP concept released in December 2005.

GDP, and the current account surplus surged to 7 percent of GDP.

The Chinese government announced in July 2006 that it was tightening further the growth of bank credit and the approval of investment spending. Two months later, the IMF told China to do even more to curb the fast output growth; China should undertake "additional hikes in benchmark interest rates and/or reserve requirement ratio" and "further currency appreciation" to "prevent the emergence of a boom-bust economic cycle."[1]

The IMF's choice of the term "boom-bust" was not rhetorical because "stop-and-go" has been a constant feature of China's post-1978 economy. Table 1 shows the following see-saw pattern in real GDP growth rates:

- 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 7.6 percent in 1999.

This boom-bust pattern of China's growth pattern is so well established that it became a dominant feature in the predictions of China analysts in the last few years. To see this point, Table 2 reports the predictions on China's GDP growth rates that were published in the *Emerging Market Monthly* published by the Deutsche Bank, which has one of the best groups of China analysts in the world. We want to stress two patterns in Table 2:

1. The December prediction for the GDP growth rate in the same year was always greater than the earlier June prediction, and the actual GDP growth rate was usually higher than the December prediction. For example, the June 2002 prediction of the 2002 GDP growth rate was 7.7 percent, the December 2002 prediction was raised to 8.0 percent, and the actual growth rate in 2002 turned out to be 8.3 percent;[2]
2. When the December prediction for the GDP growth rate in the same year was adjusted upward from the June prediction, the December prediction for GDP growth rate in the next year was always lower than the revised prediction for the same year. For example, the December 2002 prediction for 2002 (8.0 percent) was higher than

[1] "IMF urges Beijing to tighten grip on monetary policy to avoid boom-bust.", In: *Financial Times*, September 12, 2006.

[2] Similarly, the June 2003 prediction of the 2003 GDP growth rate was 7.5 percent, the December 2003 prediction was raised to 8.7 percent, and the actual growth rate in 2003 turned out to be 9.5 percent.

Table 2 The Evolution of Forecasts by Deutsche Bank on China's Real GDP Growth Rate
(in percentages)

	2002	2003	2004	2005	2006	2007
Part 1: Predictions and outcomes, using GDP concept NOT revised by economic census released in December 2005						
Prediction made in						
2001 December	7.7					
2002 June	7.7	7.7				
2002 December	8.0	7.7				
2003 June	8.0	7.5	7.6			
2003 December		8.7	8.4	8.0		
2004 June		9.1	9.0	8.0		
2004 December		9.4	9.3	8.4	8.0	
2005 June		9.3	9.5	8.7	8.3	
2006 January			9.5	9.4	8.6	8.0
Actual outcome	8.3	9.5	9.5	9.4		
Part 2: Predictions and outcomes, using GDP concept revised by economic census released in December 2005						
Prediction made in						
2006 June			10.1	9.9	9.5	8.9
Actual outcome	9.1	10.0	10.1	9.9		

Source: Deutsche Bank, *Emerging Market Monthly*, various issues.

the December 2002 prediction for 2003 (7.7 percent) when the June 2002 predictions for both years were the same.[3]

The first pattern reveals that growth in 2002-2005 was consistently higher than what analysts were expecting, which is why the June forecast was lower than the December forecast, which was in turn lower than the actual outcome. This pattern might suggest the hypothesis that there was a policy regime change in 2002 that analysts had not yet detected. Analysts were still thinking that the low-inflation-cum-lower-growth regime of Zhu Rongji would continue after he stepped down from the prime minister position in late 2002.

The second pattern of the expected future growth rate to be lower than today's unexpectedly high growth rate is consistent with the

[3] Similarly, the December 2003 prediction for 2003 (8.7 percent) was higher than the December 2003 prediction for 2004 (8.4 percent) even though the June 2003 prediction for 2004 (7.6 percent) was higher than for 2003 (7.5 percent).

hypothesis proposed above. Because analysts believed that the strongly anti-inflationary policy regime was still in effect, they expected the higher than expected growth rate to be followed soon by a lower growth rate that was policy-induced. This belief explains why, even though Deutsche Bank forecasted in June 2003 that GDP growth in 2003 (7.5 percent) would be lower than in 2004 (7.6 percent), it reversed its predictions for 2003 and 2004 in December 2003 (8.7 percent and 8.4 percent respectively) when GDP growth in 2003 came in stronger than anticipated.

To sum up, the natural pattern in China's output growth for most of the post-1978 reform period was a relatively sharp boom-bust cycle. However, as we will argue, Zhu Rongji significantly reduced the boom-bust output pattern in the 1997-2002 period. The moderation can be seen in Table 1 where the average absolute deviation of the growth rate from the sample average growth rate was 2.8 percentage points in the 1979-1996 sub-period and 1.3 percentage points in the 1997-2002 sub-period. As we shall document later, there was also a change in the behaviour of the current account balance in 1994 after Zhu Rongji, then deputy prime minister, took over management of the economy in 2003. The current account balance started running persistent surpluses from 1994 onward. The interpretation we will propose in this chapter is that the intrinsic boom-bust cycle reflected an internal macroeconomic imbalance caused by a dysfunctional state banking system, and that the persistent current account surpluses after 1994 reflected an external macroeconomic imbalance which was caused also by the dysfunctional state banking system.

We will make the case for our interpretation as follows. First, we explain the recent macroeconomic record by focusing on the interaction between China's policies and its structural characteristics. Then we examine the working of the financial system and highlight the fiscal implications of the situation. Finally, we discuss the exchange rate issue and the fixing of the banking sector within the general macroeconomic context.

1 Systemic Inflationary Tendency: The Liquidity Tango Until 1995

Our contention is that China has a built-in inflationary tendency because of the partially-reformed nature of its economic system. Specifically, the post-1978 marketisation of the economy has interacted with the continued state ownership of the key industrial and financial enterprises

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to create an inherent inflationary tendency within the economy. The marketisation of China's economy began by emphasising decentralisation reforms rather than the promotion of private economic activities, and this created an inflationary "liquidity tango" between the state-owned enterprises (SOEs), and the state-owned banks (SOBs). We describe the mechanics of this "liquidity tango" below.

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 three factors:

1. the decline in the authority of the state to veto the investment decisions of the SOEs;
2. the 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 difficult for the state to detect embezzlement via under-invoicing of sales, over-invoicing of purchases, and purchases of consumption goods disguised as production inputs; and,
3. the unwillingness of the state to close loss-making SOEs. This unwillingness resulted in the SOEs operating under the soft budget constraint.

These three factors produced an asymmetry in the investment decisions of the SOEs. The SOEs developed "a thirst for investment" because they could privatise the profits from successful investments through accounting shenanigans, and they could socialise their losses from unsuccessful investments through new bank loans; see evidence in Fan and Woo (1996). The catch is that every application for an 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 decentralisation 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 of 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 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, after 1984 the local banks faced greater financial incentives and political pressure 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 about not only because their tax revenues had 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 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 fulfilment 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. In 2005, the former vice-governor of the central bank, Guo Shuqing acknowledged:

> "that branch managers are still too independent from head office and under intense personal pressure to keep marginal enterprises afloat in order to support local economies and employ. 'Just like in the US and the UK, when you want to shut down enterprises, the local government will object,' he says. 'Some older general managers (in the provinces)

will have closer ties to the government if they want to be elected to the (local) People's Congress.'"[4]

It should be noted that this tendency to create credit excessively is also a tendency to increase the amount of non-performing 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.

2 Suspending the Liquidity Tango: Current Account Surpluses in 1994-2005

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 plain 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.[5] Zhu Rongji then began removing top bank officials whenever their banks over-lent or allowed the proportion of 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; and in 1997 they were 8.8 percent and 0.8 percent respectively. 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.

One unanticipated consequence of ending the liquidity tango was the appearance of a chronic current account surplus since 1994. To see how the liquidity tango featured in this external imbalance, consider

[4] "China's banks smarten up as they switch from state control to commercial lending", In: *Financial Times*, 20 June 2005.

[5] 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, p. 25, emphasis added).

the following accounting relationship:[6]
(current account surplus) =
(government budget surplus)
+ (savings of SOEs – investments by SOEs)
+ (savings of the non-state sector – investments of the non-state sector)
Table 3 reports the above decomposition of the current account balance. China's proclivity to generate persistent current account surpluses 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 usually kept the current account 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 from 1995 onward. The pronounced tendency toward higher current account surpluses is mainly caused by the secular rise in the savings of the non-government sector. The combined savings of the SOE and non-SOE sector rose from 20 percent in 1978 to 30 percent in 1987, and then mostly stayed close to 40 percent from 1992 onward.

With the SOEs' "thirst for investment" curbed in 1994-2002, there was an excess of savings because the SOB-dominated financial sector did not then re-channel the growing amount of savings to finance the investment of the private sector. This failure in financial intermediation by the SOBs is quite understandable. One, the legal status of private enterprises was, until recently, lower than that of the state enterprises; and, two, there was no reliable way to assess the balance sheets of the private enterprises, which were naturally eager to escape taxation. The upshot was that the residual excess savings leaked abroad in the form of the current account 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 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

[6] It is important to note that the 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:

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

Table 3 Decomposition of China's Current Account Balance[1]
(as percentage of GDP[2])

	current account balance	government budget surplus	excess savings (SOEs plus non-SOEs)	savings (SOEs plus non-SOEs)	investment (SOEs plus non-SOEs)	government investment
1978	-0.32	0.28	-0.45	20.12	20.57	17.65
1979	-0.48	-3.35	4.18	23.69	19.52	16.67
1980	-0.33	-1.53	3.03	25.25	22.21	12.72
1981	0.23	0.77	1.41	24.64	23.23	9.03
1982	1.66	-0.33	4.71	27.57	22.86	9.20
1983	0.84	-0.72	4.58	27.61	23.04	9.96
1984	0.02	-0.81	3.41	28.39	24.97	9.48
1985	-4.17	0.01	-2.69	26.93	29.62	8.89
1986	-2.52	-0.81	-1.72	28.11	29.83	8.12
1987	0.10	-0.53	0.34	30.75	30.41	6.27
1988	-1.03	-0.90	-0.31	32.12	32.43	4.94
1989	-1.13	-0.94	-0.47	32.19	32.66	4.35
1990	2.79	-0.79	3.72	34.57	30.84	4.33
1991	2.90	-1.10	4.19	37.14	32.96	2.37
1992	1.07	-0.97	1.94	38.65	36.71	0.55
1993	-1.97	-0.85	-1.14	41.97	43.11	0.36
1994	1.36	-1.23	2.49	44.17	41.68	-0.43
1995	1.71	-0.99	1.23	41.81	40.57	0.23
1996	2.14	-0.78	1.73	40.85	39.12	0.20
1997	3.81	-0.78	4.94	42.19	37.25	0.75
1998	3.86	-1.18	4.58	40.20	35.62	1.78
1999	2.72	-2.12	4.34	37.97	33.63	3.50
2000	2.51	-2.78	4.67	36.39	31.72	4.65
2001	2.24	-2.59	5.74	37.52	31.79	6.21
2002	2.59	-2.99	5.53	36.66	31.14	8.07
2003	2.21	-2.50	5.52	38.94	33.41	8.87
2004	2.86	-1.53	4.39	39.28	34.89	9.26

Notes:
[1] Current account balance is net exports in GDP accounts; government investment is the difference between government revenue (fiscal accounts) and government consumption (GDP accounts). The fiscal year data were not realigned to be compatible with calendar year GDP data.
Current account = (government revenue - government consumption - government investment) + (savings of SOEs - investments of SOEs) + (savings of non-SOEs - investments of non-SOEs): CA = (T-G) + (S-I)SOE + (S-I)non-SOE
[2] GDP data 1993-2004 are based on a new GDP concept released in Dec. 2005.
Source: China Statistics Yearbook, compiled from various annual editions.

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 that there is still an excessive amount of SOE investments.

In discussions on the increase in the savings rate, a common view is that the increase 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 incomplete because it seems that there has also been an increase 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.[7] Other changes that could have caused urban and rural saving rates to rise significantly would include:

- the lower birth-rate policy. Because children have been traditionally the source of support in old age, the limit on the number of children (one child in urban area, and two children in rural area) would have caused people to save more for retirement;
- the steady decline in state subsidies to medical care, housing, loss-making enterprises, and education led to people saving more to insure against future bad luck, buy their own lodging, and invest in their children;
- given the high rate of return to capital, the secular improvement in the official Chinese attitude toward market capitalism has no doubt encouraged both rural and urban residents to save for investment.

Based on the work of Liu and Woo (1994) and Woo and Liu (1995) on savings behaviour, we speculate that the heightened desire to invest is a possibly important reason 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 could not 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 industrialisation, 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 labour-intensive enterprises. Since competition among rural enterprises is very fierce at the present, it is no longer profitable to invest in the same type of factory workshop.

[7] The Economist Intelligence Unit (2004, p. 23) reported that "farmers' propensity to save seems to have increased."

Rural enterprises must move up to the next stage of value added production in order to be profitable. This new generation of rural enterprises is much more capital-intensive, and thus requires a much larger amount of start-up 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. 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. Our investment-motivated savings hypothesis is not new, according to Jeffrey Williamson (1988), the historical record of Western Europe and North America shows that "investment demand seems to have been the driving force behind private saving and accumulation, past and present."

Table 4 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 30.0 percent in 1984-1988, 33.7 percent in 1992-1996, and 36.7 percent in 1997-2004. SOE investment was 19.5 percent in 1984-1988 and 1992-96, and then fell to 17.0 percent in 1997-2004. We are of the opinion, however, that the amount of *state-directed* investment in the 1997-2004 period could be more than three percentage points higher than 17.0 percent of GDP because many of the big SOEs that existed in 1988 had converted themselves (or components of themselves) by 2000 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.

Contrary to the secular rise in total investment and the possibly secular rise in state-controlled investment, rural investment has fallen secularly from 8.6 percent in 1984-88, to 7.6 percent in 1992-96, and then to 7.1 percent in 1997-2004. Our hypothesis is that a major reason for the decline in the rural investment ratio is that the traditional labour-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.

Obviously, increasing budget deficits and SOE investments to make up for the shortfall in private investment in order to reduce the trade surplus can only be a satisfactory solution in the short run. In the long run,

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Table 4 Investment Trends by Ownership[1]

(investment as percentage of GDP)

	Total	Rural[2]	SOE[3]
1981	29.0	7.5	20.1
1982	25.6	6.8	17.6
1983	27.2	7.9	18.1
1984[4]	28.1	8.5	18.2
1985	29.7	7.9	19.6
1986	30.0	8.2	20.7
1987	30.6	8.9	19.3
1988	31.8	9.3	19.5
	(June 4th Tian An Men Disruption, 1989-1991)		
1992	27.9	7.1	18.7
1993	32.2	7.1	19.8
1994	37.6	7.7	21.2
1995	36.1	7.9	19.7
1996	34.7	8.1	18.2
1997	34.2	7.9	17.9
1998	33.6	7.0	18.2
1999	35.0	7.2	18.7
2000	35.7	7.3	17.9
2001	36.5	7.1	17.3
2002	37.3	6.9	16.2
2003	38.9	6.8	15.1
2004	42.1	6.8	15.0
average 1984-1988	30.0	8.6	19.5
average 1992-1996	33.7	7.6	19.5
average 1997-2004	36.7	7.1	17.0

Notes:

[1] Investment refers to fixed asset investment. Components were adjusted proportionately so that total investment equals fixed asset investment in the Expenditure Approach to Computing GDP; e.g. for 2004, investment is from *China Statistical Yearbook,* Table 6-4 and then adjusted to be identical to Table 3-14; and GDP is from Table 3-13 (expenditure approach).

[2] Rural = rural collectives and rural individuals.

[3] SOE = state-owned units only, does not include state-controlled units listed under various types of joint-owned units (e.g. share-holding units, joint-venture units). So state-directed investment exceeds SOE investment.

[4] 1984 was the year that the central government gave the clear signal that it had no ideological objection to the formation of rural enterprises.

Source: China Statistics Yearbook, compiled from various annual editions.

the increased public investments could follow an increasingly rent-seeking path that is wasteful (e.g. building a second big bridge to a lowly-populated island to benefit a politically-connected construction company as in Japan), and the increased SOE investments could convert themselves into non-performing 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 desirable for microeconomic efficiency regardless of the extent that investment-motivated savings has contributed to the rise in the saving rate.

3 The SOBs Are Undermining the State's Fiscal Position

The high inflation that China's banks enabled whenever they participated in the liquidity tango, and the large trade surpluses that they generated whenever they were barred from the liquidity tango are not intrinsic features of a banking system. These are outcomes from a monopoly SOB system operating in an economic environment where state-controlled companies exert significant influence on resource allocation. It should now be pointed out that the SOBs also constitute a potentially grave threat to the public finances of the state.

To see the fiscal implications of the SOB system, one has only to be reminded of two recent events. First, in 1998-1999, the government injected new capital into China's banks and transferred a large proportion of the non-performing loans (NPLs) to the state-owned asset management corporations (AMCs) in order to raise the capital adequacy ratio (CAR) of the four largest state-owned banks, commonly referred to as the Big Four,[8] from 4.4 percent at the end of 1996 to over 8 percent at the end of 1998. However, the rapid appearance of new NPLs after 1998 had lowered the average CAR of the Big Four to 5.0 percent by the beginning of 2002.

The second event is that since 2003, China has been engaging in a second round of recapitalisation of the SOBs. Some unorthodox methods have also been used, e.g. in late 2003, Bank of China and China Construction Bank received a capital injection of $22.5 billion each from

[8] The Big Four are Agricultural Bank of China, Bank of China, China Construction Bank and Industrial and Commercial Bank of China.

the foreign reserves of the People's Bank of China.[9] The result of this still-ongoing second recapitalisation, and the rapid expansion of loans in the last two years is that the NPL ratio has improved, and the CAR of the Big Four was about 8 percent at the end of 2004.

The important question is how many more rounds of bank recapitalisation 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. Since the stock of publicly-acknowledged government debt in 2004 is only about 33 percent of GDP, it is common to hear official assurances that the current fiscal deficits of less than 2 percent of GDP do not pose a problem for debt servicing by the state.[10] However, the current value of the debt-GDP ratio is not a good indicator of the sustainability of the existing fiscal policy regime; a better indicator would involve working out the evolution of the debt-GDP ratio over time.

Briefly, a fiscal regime that causes the debt-GDP ratio to:

- grow explosively is unsustainable;
- decline secularly to zero is sustainable;
- attain an equilibrium steady-state value that is "low" is unlikely to destabilise the economy; and vice-versa.

To put the issue formally, the evolution of the debt-GDP ratio as given by:

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

r = real interest rate on government debt

f = primary fiscal deficit rate
= [state expenditure excluding debt service - state revenue] / GDP

b = NPL creation rate
= [change in NPL in SOBs] / GDP

y = trend growth rate of real GDP

[9] The People's Bank of China established an investment company (Central Huijin Company) under the State Administration of Foreign Exchange to undertake this injection of capital. This gave Huijin 85 percent of the ownership of China Construction Bank, and 100 percent of Bank of China.

[10] One should really use the consolidated debt of the state sector because it includes 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.

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

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

China appears to belong to this case because its post-1978 annual growth rate has averaged 9.4 percent, its growth rate in the next ten years is likely to be above 8 percent; and the real interest rate has been about 4 percent. For the generation of likely future scenarios, we will make the conservative assumptions that y is 8 percent, f is 1 percent, and r is 6 percent.[11] It is difficult to predict b, the rate that banks would generate NPLs, because it depends on the type of banking reform undertaken. If no meaningful reforms are undertaken, then b is likely to remain at the historic value of 6 percent. So conditional on the effectiveness of reforming the SOBs, we get:

$$(\text{Debt/GDP})_{\text{steady-state}} = 350 \text{ percent when } b = 6 \text{ percent}$$
$$(\text{Debt/GDP})_{\text{steady-state}} = 200 \text{ percent when } b = 3 \text{ percent}$$
$$(\text{Debt/GDP})_{\text{steady-state}} = 100 \text{ percent when } b = 1 \text{ percent}$$

The noteworthy finding from above scenarios is that China will produce a level of $(\text{Debt/GDP})_{\text{steady-state}}$ that is high by international experience despite the optimistic assumptions that the long-run growth rate is 8 percent and that that b will be lowered from 6 percent of GDP to 1 percent. The most optimistic outcome is still two-thirds larger than what the European Union has set to be the "safe" debt-GDP target (60 percent) for its members. The banking system has made China vulnerable to a fiscal crisis even though there is a theoretical steady-state level for the debt-GDP ratio. Of course, we cannot attribute the creation of NPLs entirely to the SOBs; their chief customers, the embezzlement-ridden and inefficiency-ridden SOEs,[12] deserve an equal share of the blame.

[11] f has been above 1.5 percent for the past seven years. r was 4 percent in the past only because the interest rate was regulated. We think that the implementation of financial deregulation that is necessary for normal healthy development of the financial sector will render r to be at least 6 percent because, one, according to Solow (1991), the stylised fact for the real interest rate in the United States is that it is 5 to 6 percent; and, two, both the marginal rate of return to capital and the black market loan rate have been more than 20 percent.

[12] See Woo *et al.* (1994).

4 Freeing the Interest Rate and the Exchange Rate to Address Macroeconomic Imbalances?

A change in the macroeconomic situation appeared to have occurred near the end of 2002, which coincided with the 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 2002, 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, especially after the monetary spigots were opened and administrative controls on investments were relaxed to combat the expected deflationary impact of SARS.

By the third quarter of 2003, it became clear that inflation had replaced deflation, and on August 23, the People's Bank of China (PBC) announced 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.[13] At the same time, the state started implementing administrative measures like the closing down of investment projects in unauthorised development zones.[14] The economy, however, continued to surge ahead causing prices of industrial inputs to soar, and power shortages to worsen.[15]

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 the maximum loan percentage for steel, aluminium, cement and property investments to 60 percent from 75 percent."[16] Then on April 25, 2004, PBC raised the required reserve ratio to 7.25 percent. Although official GDP growth was 9.1 percent in the third quarter of 2004 compared to 9.6 percent in the second quarter of 2004, there was an unexpected re-acceleration of economic activities (especially investment spending) in September

[13] "China Moves to Tighten Bank Credit", In: *New York Times*, August 26, 2003.

[14] "2,400 development zones closed", In: *South China Morning Post*, December 29, 2003.

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

[16] "Central bank chief juggles hot economic potato", In: *South China Morning Post*, May 14, 2004.

that reignited fears of overheating. "The new Goldman Sachs China Activity Index ... shows that the economy accelerated modestly to 12.5 percent [in September] from 11.9 percent [in August]."[17] The result was that, on September 9, 2004, the Deutsche Bank economist, Jun Ma (2004), raised his forecast for output growth in 2004 to 9.4 percent from his August 12, 2004 forecast of 9.1 percent. This perception of an economy on the verge of an inflationary spurt was also shared by PBC.

On October 28, 2004, China raised the official benchmark interest rate for the first time in nine years to slow down what the *New York Times* described as its "breakneck economic growth and inflation."[18] This news report quoted a foreign bank economist as hailing "the interest rate increase ...[to be] a historic embrace of free-market tools of economic management despite possible internal political repercussions" – an intellectual victory for market regulation of investment level through the interest rate mechanism over quantitative control of investment level through the administrative mechanism.

Earlier, China, which had been under US and Japanese pressure to appreciate the yuan as part of its international responsibility to eliminate imbalances in the global balance of payments, had been told that yuan appreciation was also for its own good.[19] Morris Goldstein and Nicholas Lardy (2003) advised the Chinese government to appreciate the yuan by 15 to 25 percent because this step would remove "the incentive for further speculative capital inflow and reserve accumulation. No longer would the foreign component of the money supply by working at cross-purposes with the needs of domestic stabilisation."

In our opinion, the above instinctive calls by foreign economists for the use of the price mechanism to solve China's internal imbalance and external imbalance, via the interest rate and the exchange rate respectively, are only partially correct. These pronouncements miss the basic point that free-market tools can work only in a free-market environment.

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[17] Goldman-Sachs, Charting China, Issue No: 04/09, August/September 2004.

[18] The 1-year deposit rate and the 1-year base lending rate were both raised on October 28, 2004 by 27 basis points to 2.25% and 5.58% respectively. PBC also removed the ceiling on loan rates, see Keith Bradsher, "China's Banks, in Transition, Raise Rates", In: *New York Times,* October 29, 2004. On November 10, 2004 the PBC raised the reserve requirements on commercial bank foreign exchange deposits to 3%.

[19] For example, "Snow calls on Beijing to let currency float", In: *Financial Times*, September 2, 2003; and Kuroda and Kawai (2002).

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First, on the effectiveness of the interest rate as a policy tool to reduce the demand for loans, the relevant issue is whether China has the free-market environment where the SOEs are no longer operating under the soft budget constraint. Raising the cost of capital will not reduce the "thirst for investment" by SOEs unless hard budget constraints are credibly imposed on the still-large SOE sector. The imposition of hard budget constraints on the great number of loss-making large SOEs is naturally as much a political decision as an economic one. This means that the decision to enforce hard budget constraints is dependent on whether there have been enough institutional changes – like adequate social safety nets, enhanced political legitimacy, and improved social controls – such that the government has more ability to handle the social fallouts from economic restructuring. The answer to this question in 2006 is that the government still does not have an adequate social safety net in place to accommodate mass unemployment.

Second, on the effectiveness of the exchange rate as a policy tool to reduce the balance payments surpluses, we begin by mentioning that, given China's capital controls, a freely floating currency regime could mean a value for the yuan that would be greatly over-appreciated compared to what its value would be under free capital flows, and would therefore reduce economic growth significantly.[20] Freeing capital flows is not an option, however. Given the weakness of the balance sheets of China's state-owned banks and the considerable embezzlement of state assets that has occurred, the experience with the Asian financial crisis cautions strongly against allowing the free movement of capital in the medium term.

Our biggest 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

[20] In Robert Mundell's opinion: "China's growth rate could fall by half and foreign direct investment (FDI) could slow to a crawl if the country were to abandon its long-standing support of pegging the currency", quoted in "Abandoning peg will slash growth 50 percent in China", In: *South China Morning Post*, September 15, 2003.

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. Goldstein and Lardy are remiss in that, besides sterilisation 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. In the preceding sections, we 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 present leadership 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 programme 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 emphasised 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 secondarily in appreciation of the yuan.

When one takes a longer view of Chinese economic management, the realisation that China would emerge as a major economic power in the medium term (upon the near completion of its transition to a normal market economy) makes it clear that a freely floating regime would be the inevitable fate of the yuan. A "good" float would be one where there is also free movement of capital so that the residents of this large economic entity could hedge their portfolios with worldwide asset diversification. Right now, because of China's weak domestic banking system, it is unwise to allow free capital outflows. An appreciation of the yuan

that would render the balance of payments zero now, will have to be followed by a depreciation when capital outflows are freed. This means that the 15 to 25 percent appreciation recommended by Morris and Lardy is an overkill that will result in a see-saw movement of resources within the economy as it continues to be deregulated. It is perhaps better to avoid this initial overvaluation by engineering a series of much smaller movements of the yuan, say 3 percent each time, in the near term.

Because of the state ownership of the banks, the effectiveness of credit quotas, and the existence of capital controls, anticipations of this series of minor revaluation would not cause the government to lose control of the monetary situation because of the inflow of speculative capital. In short, the expansion of foreign reserves from speculative inflow cannot cause the non-profit-maximising SOBs to expand the money supply without the acquiescence of PBC.

5 Fixing the Banking System to Facilitate Macroeconomic Management

Given the pivotal role of the SOBs in helping to generate the internal and external imbalances, fixing the banking system would lower the costs of macroeconomic management. The most important priority for financial sector reform is the appearance and growth of competitive *domestic* private banks. Since 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 favour 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 privatised. At the same time, the laws on the establishment of new banks should be loosened, and interest rates deregulated. However, it is most crucial that financial sector liberalisation 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 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 it to assume its rightful place among the major international financial centres, 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 liberalisation 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 whipsawed the economies of South-East Asia and Latin America. Just as in financial market liberalisation, capital account opening should also proceed gradually and in stages, because it must be accompanied by sophisticated financial market regulation, something that is definitely not in place at this time. The reality 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 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).

An important part of financial reform should be the promotion of the development of sound rural financial institutions. The government can usefully draw upon the wealth of international experiences with various schemes in developing countries to direct investment credit to the rural areas. In particular, we wish to draw attention to the successful Indonesian experience of establishing a self-sustaining and profitable banking system (the *Unit Desa* system) in the countryside to provide a starting point for discussing how to accelerate financial development in rural China.[21] China should allow the appearance of new small-scale rural financial institutions that will mobilise local savings to finance local investments as quickly as adequate prudential supervision can be put into place.

[21] Indonesia is very similar to China in key economic and institutional features: a geographically vast, and heavily populated economy, and the rural financial system is dominated by branches of a state bank (Bank Rakyat Indonesia, and Agricultural Bank of China respectively); see Woo (2005).

6 Conclusion

We conclude with three observations.

First, while it is important to manipulate aggregate demand via monetary-fiscal policies to maintain the highest sustainable growth rate that is compatible with price stability, China is in the fortunate position where it can implement other economic policies that will not only increase the natural growth rate but also reduce its internal and external macroeconomic imbalances. 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.[22] The switch to the new growth engine necessitates that China continues the privatisation of non-defense-related state enterprises that are not natural monopolies, begins the privatisation of SOBs, and drastically reduces the legal discrimination against the private sector. These reforms will, one, greatly moderate the boom-bust cycle by stopping the liquidity tango between the SOBs and the SOEs, and, two, reduce the tendency toward current account surpluses by reducing savings and increasing investments.

Second, the use of price mechanisms as the only policy instruments for all economic problems at this point is not appropriate for a partially-reformed economy like China. It will be more effective and efficient to prevent a chronic current account surplus by improving financial intermediation than either to use large exchange rate movements to affect China's saving-investment behaviour or to re-start the liquidity tango.

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

[22] 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).

shows the significant economic impact that China is now already having on the world. Two, it portends that the anticipated continued rapid 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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