The Chinese Conundrum: External Financial Strength, Domestic Financial Weakness

Brad Setser*

Abstract

China’s recent investment boom looks much like the investment boom in the Asian tigers of the 1990s. Both were marked by a surge in bank credit to the private sector, a real estate boom and questions about the quality of domestic financial intermediation. Yet, China has few of the external vulnerabilities that marked the Asian tigers. Its current account surplus is rising, and its reserves far exceed its short-term external debt. However, China’s external strength is unlikely to allow it to avoid future banking trouble and a new round of costly non-performing loans. The trigger for the next generation of bad loans in China, though, will not be sudden withdrawal of external credit (JEL classification: F32, G21).

1 Introduction

This article examines the potential risks created by China’s recent investment boom by comparing developments in China since 2001 with the Asian economies that boomed in the mid-1990s. There are both obvious parallels and differences between China now and the emerging Asian economies in the 1990s.

Like the Asian tigers, China today is marked by a surge in private credit, a real estate boom, weak bank regulation and a large, bank-dominated financial sector. Reforms to China’s financial system have in many ways made China banks more like the banks in the Asian “tiger” economies before 1997. Chinese banks no longer just finance moribund state firms; they increasingly finance real estate development, residential mortgages and many dynamic private (or quasi-private) firms as well. And like many Asian tigers, China maintains a de facto peg to the dollar.

Yet, China lacks the external vulnerabilities that marked the Asian tigers despite a comparable credit, real estate and investment boom. China’s current account surplus has grown during its boom, as savings rose even faster than investment. China’s exchange rate depreciated in real terms between 2000 and 2005. The dollar’s 2005 rise has not fully offset its...
2002–2004 fall. China has—according to Ragu Rajan, the International Monetary Fund’s (IMF’s) chief economist—enough reserves to protect against anything short of the apocalypse. Its reserves now exceed its debts by factor of six¹ and its total external debt by a factor of nearly three. That is the Chinese conundrum: extraordinary domestic financial weaknesses combined with extraordinary external financial strength.

Most severe banking crisis in major emerging economies—at least recently—have coincided with a currency crisis. An expansion of bank credit often led to a surge in domestic demand and significant current account deficits. In Asia, those deficits were financed by short-term debts denominated in foreign currency. When external creditors lost confidence in the country, sharp falls in the currency increased the real value of all foreign-currency-denominated debts. The crisis countries (advised by the IMF) typically raised domestic interest rates to defend their currencies, further adding to the distress of the financial system.² Only a costly government bailout saved the banks from outright bankruptcy.

These stylized facts do not fit all recent crises. Argentina, for example, experienced a currency and banking crisis without a boom in private credit. Its crisis stemmed from the deflation contraction required to correct an overvalued peso in the context of its currency board arrangement, augmented by the complications created by extensive liability dollarization once Argentina abandoned its peg. Yet they do capture the basic dynamics of many recent emerging market crises, particularly crises driven by a large expansion of bank credit to the private sector rather than excessive government borrowing.

This article will argue that China’s external strength will not allow China to avoid a new round of costly non-performing loans, though the trigger that leads a new generation of bad loans in China will differ from the trigger of the Asian crisis. China simply is not vulnerable to a sudden withdrawal of external credit. In China’s case, trouble is more likely to emerge from a shock to the real economy than from a financial shock. Chinese banks have financed too much capacity, chasing too little demand—excess capacity that will eventually give rise to a new generation of bad loans. Investment growth is sure to slow at some point. Moreover, China’s overall economy is increasingly exposed to a global slowdown.

¹ The BIS–OECD–World Bank–IMF data indicates China had $69.2b in short-term external debt in September 2005. The IMF reports a higher number—$104.3b—for the end of 2004. Combining the increase in the joint external debt data and the IMF’s stock number suggests an end 2005 total of around $125b, against $819 billion in reserves.

² See, among others, Artera and Eichengreen (2002); Kawai, Newfarmer and Schmukler (2001) and Roubini and Setser (2004).
There is no realistic way the government of China can avoid picking up the bill for a new generation of bad loans from the post-2002 credit boom. The challenge will be to prevent the surge in bad loans likely to accompany a slowing Chinese economy from generating self-reinforcing dynamics that add to the downturn.

2 Asian crisis countries

2.1 Shared characteristics of the Asian tigers

The Asian tigers that encountered severe crises in 1997–98 shared several important characteristics. All were marked, to varying degrees, by:

- A surge in credit to the private sector;
- Real estate or stock market booms, often fueled by the expansion of credit;
- In comparison to other emerging economies, large and generally bank-dominated financial sectors;
- Weak financial regulation; regulatory standards for the reporting of non-performing loans were lax, and in many countries, even these lax standards were not enforced;
- Persistent—and in the case of Thailand, quite large—current account deficits;
- Poorly sequenced capital account liberalization; and
- Balance sheet weaknesses; external deficits often were financed with short-term foreign currency denominated debt, creating a large stock of short-term claims that had to be rolled over.

Graciela Kaminsky (1999) summarizes these weaknesses accurately:

International lending in the 1990s led to a surge in domestic credit and skyrocketing stock and real estate prices in basically all countries in East Asia…. The boom in credit did not result in a consumption boom but in what is now widely viewed as “excessive” investment and a deteriorating current account. This time around, however, the deterioration of the financial sector was far more reaching because [of] the deepness of financial markets in Asia…. With the economies so debt ridden, mostly at very short maturities and in foreign currency, it is no wonder how seemingly mild adverse external shocks could have crystallized into a worst-case scenario of a brutal currency crisis.

Table 1 lays out the evolution of the key Asian tigers—at least those who experienced a crisis—from 1992 to 1997 and compares their experience with that of China from 2000 to 2005. It shows how growth
Table 1 Key economic and financial indicators

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Adapted from Lindgren et al. (1999). Additional data from Radelet and Sachs (1998). Data on China from World Bank (2006a), UBS (China data watch) and the author’s forecasts. All calculations have been adjusted to reflect China’s revised GDP.

- Short-term debt to reserves for mid-1997 (eve of the crisis)
- The combination of a large fall in many Asian currencies, extensive foreign-currency-denominated debt and, in Thailand’s case, a severe slowdown that started in mid 1997 led reported credit to GDP ratios to spike upwards at the tail end of 1997.
- This calculation assumes that 40 percent of China’s loans were not performing or otherwise impaired in 2002, a substantially higher number than in the official data. The official number is more like 25 percent.
accelerated in the Asian tiger economies in the mid-1990s, driven in almost all cases by an expansion of credit to their private sector. The 2002–03 acceleration of China’s growth looks similar; it too was driven by a sharp expansion of credit to the private sector.

In the Asian tigers, however, the growth acceleration and credit expansion led to current account deficits. Most Asian countries had more short-term external debt than reserves, and in general, the ratio of short-term external debt to reserves rose prior to the crisis. The rise in short-term external debt was not entirely an accident. Several Asian tigers—most notably Korea—maintained restrictions on foreign direct investment even as they dropped other restrictions on capital flows and allowed their banking systems to borrow from abroad. Thailand created a special facility—the Bangkok Interbank Facility (BIBF)—for cross-border borrowing. This facility was meant to turn Bangkok into an international banking center to rival Singapore. However, it became a vehicle for funneling external borrowing funds into the Thai economy. International banks worried—correctly—about the health of Indonesia’s banks. They preferred to lend directly to Indonesian firms. Malaysia, in contrast, imposed relatively severe controls on short-term external borrowing.

Here, there are obvious differences between the Asian tigers and China. China’s current account surplus has expanded during its investment boom. Capital inflows consequently have financed reserve accumulation. Moreover, China has encouraged foreign direct investment while maintaining restrictions on other capital flows.

The surge in bank credit was most pronounced in Thailand and Malaysia, although bank credit to the private sector was rising relative to GDP in both Korean and Indonesia as well. The modest bank credit to GDP ratio in the case of Korea is a bit deceptive, as banks accounted for only about half of the total financial system assets in Korea. Credit from outside the banking system—merchant banks, insurance companies, investment trust companies and the like—was growing faster than bank credit. Lindgren et al. (1999) note: “In Korea, Malaysia and Thailand, private sector credit in nominal terms expanded rapidly during the 1990s, at an average rate of 15–20 percent compared to inflation rates of 3–10 percent. Total commercial bank and near-bank assets grew from

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3 In Thailand, commercial banks held 64 percent of total financial system assets, finance companies 20 percent and state-owned banks another 10 percent. Total financial assets were equal to 190 percent of GDP. In Malaysia, commercial banks held 70 percent of all “banking assets” with the remainder held by finance companies and merchant banks. Total assets—including assets of insurance companies—equaled 300 percent of GDP. In Korea, total financial system assets were close to 300 percent of GDP, but commercial banks only held 52 percent of total assets. Lindgren et al. (1999) at 13.
between 50 and 100 percent of GDP to between 150 and 200 percent of GDP. As a comparison, deposit money banks held assets equal to 30 percent of GDP in Mexico, 48 percent in Brazil, 80 percent in the US, 136 percent in the European Union and 300 percent in Japan."

Yet, before the crisis, the banking sector in many Asian economies showed few signs of overt distress. NPLs were generally low and most banks appeared to be well-capitalized. There is an obvious parallel with China: reported NPLs are falling, in part because the rapid expansion of bank lending, and more and more recapitalized Chinese banks are reporting that their capital meets or exceeds international norms.

However, the crisis brought a number of latent weaknesses in the banking and financial systems in the Asian tigers to the surface:

- Finance companies engaged in bank-style financial intermediation—borrowing short and lending long—without being subject to the same regulation as banks. In many countries, banks also started to take additional risk in the face of aggressive competition from non-banks. Lindgren et al. (1999): “In most countries, the growing non-bank financial institutions held riskier assets and more volatile financing than commercial banks, which made them increasingly vulnerable to a decline in asset quality and to a change in investor and depositor sentiment....[Non-bank financial institutions] were favored by the easier licensing requirements (Thailand) and less stringent regulations, including lower capital requirements (Korea and the Philippines) than those applied to commercial banks. Merchant banks in Korea and finance companies in Thailand were the first to face liquidity shortfalls.”

- Banks in all Asian Tiger economies—particularly in Indonesia and Korea—had close ties with non-financial firms. In Korea, a history of “policy lending”—where the government channeled credit to the Korean Chaebol—had created strong ties between the banks, the government and the Chaebol, but the banks were generally not formally owned by the Chaebol. In Indonesia, many private banks were

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4 Thailand is a bit of an exception, as its banking system showed signs of trouble in 1996. But even in Thailand, where Non-Performing Loans (NPLs) were rising prior to the crisis, reported NPLs remained at manageable levels. And Thai banks reported capital adequacy ratios of around 9 percent through 1997. IMF (2001).

5 Lindgren et al. (1999): “in Korea a single ownership limit of 4 percent meant that banks were owned by a diverse group of individuals, while in Thailand, despite a similar rule, several of the large banks were owned or controlled by family groups. Similarly, in Indonesia, Malaysia and the Philippines, banks were owned or controlled by corporate conglomerates.”
little more than funding arms (often poorly capitalized) for local conglomerates. Limits on exposure were ignored.

- Little attention was paid to the growing foreign currency exposure of the banking system. BIBF is a particularly notorious example.\(^6\) Regulation that limited the size of the open foreign currency position of the banking system did not prevent an expansion of external borrowing matched by local loans denominated in foreign currency. In many countries, such foreign currency loans were used to finance domestic real estate investment (Thailand) or local firms with local currency revenues (an Indonesia taxi company), leaving the banks exposed to large losses in the event of a currency depreciation.

2.2 Differences among the Asian tigers

Despite the common links across the different Asian crisis countries, each country had unique strengths and weaknesses.

Thailand’s crisis was the easiest to anticipate. It had the largest and most persistent current account deficit, the most short-term external debt, the biggest credit boom and the biggest real estate boom. Short-term external debt exceeded 30 percent of Thai GDP in 1997—an exceptionally large ratio (Roubini and Setser, 2004). Much of that short-term debt had been used to finance investment in the Bangkok property market.

Korea ran smaller current account deficits than the other Asian crisis economies, and its overall external debt remained modest relative to its export capacity. Korea had important structural weaknesses, including an over-leveraged corporate sector, but those weaknesses were smaller than in Thailand or Indonesia. However, the liberalization of Korea’s capital account had been particularly poorly sequenced: its regulatory regime had favored short-term external borrowing intermediated through Korea’s banking system and had discouraged FDI and long-term borrowing. As a result, almost all of Korea’s external debt was short-term.

Malaysia had large current account deficits and had experienced a huge credit, real estate and stock market boom. But Malaysia had severely restricted the ability of Malaysian banks and firms to borrow in foreign currency; so most of its current account deficit was

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\(^6\) From mid-1995 to the end of 1996, year-over-year growth in private credit exceeded 15 percent, or over two times the pace of GDP growth. Commercial bank lending increased by 10 percent, finance company lending increased by 20 percent and lending from the intermediaries in BIBF, all denominated in foreign currency, increased by 35 percent; see IMF (2001). For more on the consequences of the massive resulting currency mismatch, see Allen et al. (2002).
financed by foreign direct investment and portfolio equity flows. Malaysia’s comparatively low levels of short-term debt clearly helped it to avoid turning to the IMF.

Indonesia ran a smaller current account deficit than Thailand and Malaysia and experienced a smaller credit boom. It had the fewest \textit{ex ante} signs of external vulnerability. However, the large, unhedged foreign currency exposure of Indonesia firms proved to be particularly destabilizing. Once the rupiah started to fall, firms with large foreign currency debts needed to hedge against further falls in the value of the currency.

The exceptionally close ties between President Suharto, his family and Indonesian firms and banks also proved to be a source of instability once Suharto’s continued rule was called into question. The IMF, the World Bank and the US Treasury did not want to “bailout” the corrupt status quo, yet any political change threatened the privileged position of Indonesia’s existing elite. Some leading businesses were directly owned by the family of President Suharto, Indonesia’s aging, autocratic President; other major conglomerates were owned by ethnically Chinese business interests that had formed a close alliance with the President (Chua, 2002). Once Suharto’s regime started to look shaky, the Indonesian elite started to pull their funds out of local banks, adding to the pressure on the rupiah. Indonesia ended up experiencing a far deeper crisis than economies with more overt initial vulnerabilities.

3 China’s banking system

China shares some—but clearly not all—of the internal vulnerabilities of the Asian “tigers” before their crisis yet lacks their external vulnerabilities. This section will explore the vulnerabilities arising from the rapid expansion of China’s banking system. Many of the legacy NPLs from the 1990s have been moved off the balance sheet of the banks, even if the government has often shifted the bad loans to asset management companies (AMCs) rather than realize the likely loss immediately. Consequently, the health of China’s banking system increasingly hinges on the quality of the loans it has extended during the post-2002 credit boom.

Broadly speaking, this transformation has made China’s banking system more like the banking systems of the Asian tigers and less like the Chinese banking system of the 1990s. China’s banks no longer are primarily a vehicle for financing loss-making state-owned enterprises. But the Asian tigers did not get into trouble lending to state enterprises. Rather, they got into trouble financing over-investment, whether in
the local real estate sector (Thailand) or by large industrial groups (the Korean chaebol). China’s banks may avoid repeating the mistakes they made in the 1990s, but may end up making some of the same mistakes banks elsewhere in Asia made in the 1990s.

3.1 A bank-dominated financial system

Banking deposits are the dominant form of household saving, and bank lending is the main source of external financing for Chinese firms. Non-bank channels for financial intermediation are poorly developed. Indeed, China’s “big four” state commercial banks (SCBs) are larger—relative to China’s GDP—than the banking systems of most emerging economies. Lending from the four large Chinese “state commercial banks” alone is roughly 70 percent of China’s GDP. At the end of 2005, bank lending stood at a bit less than 113 percent of GDP, and the bank deposit base was a bit under 158 percent of GDP. By comparison, bond market capitalization was about 15 percent of GDP and equity market capitalization was around 8 percent of GDP.7

In many ways, China’s bank-dominated financial system resembles a far larger version of Indonesia’s bank-dominated financial system more closely than it resembles the more developed financial system of Thailand, Malaysia or Korea. In both China and Indonesia, state banks account for a large share of total deposits. As in Indonesia, the chief competitors to China’s big SCBs are other banks, not finance companies or other non-bank financial intermediaries. Lending from “joint stock commercial banks” (JSCBs)—often owned by China’s local authorities, though private investors sometimes also hold stakes8—has grown particularly rapidly since 2002. The third tier of the financial system—city banks—also are often owned by local authorities.

3.2 The removal of legacy bad loans from bank balance sheets

China suffers from one weakness no Asian tiger fully matched: Despite significant improvements in the balance sheets of Chinese banks in 2004 and 2005, China’s bank balance sheets generally are in far worse shape

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7 In 2004, firms obtained roughly $300 billion in financing from the banking system, $4.5 billion from the bond market and $16 billion from the sale of “A” shares on the Shanghai and Shengzen exchanges (McGregor, 2005). During the course of 2005, a short-term commercial paper market developed to tap the banking system’s plentiful liquidity, reducing firms dependence on “bank lending” for external financing at least somewhat. See World Bank (February 2006).

8 Following a surge in foreign investment, most large JSCBs and city commercial banks now have strategic investors from abroad. See Ma (2006).
in the midst of China’s boom than the banks in the Asian tigers were in the midst of their boom.\textsuperscript{9} Legacy bad loans from past lending booms have never been completely removed from the balance sheets of the Chinese banking system. Anderson (2005) has estimated that 70 percent of the loans made in the 1992 and 1993 lending boom ultimately failed to perform. Others have estimated that, in the late 1990s, up to half of the banks’ total loans were not performing (Ma, 2006; Podpeira, 2006).

In broad terms, the bank’s balance sheet can be cleaned up in one of two ways. The government can finance a recapitalization, whether by buying bad loans from bad banks at an above market price or by providing an injection of funds to the banks after they write down their bad loans.\textsuperscript{10} Alternatively, state-owned banks can be allowed to use their ongoing profits to finance the write-down of past bad loans. China has used both approaches.

In 1998, the government injected Renminbi (RMB) 270 billion ($33 billion at 1998 exchange rates) in equity capital into the banking system.\textsuperscript{11} In 1999, RMB 1400 billion ($169 billion at 1999 exchange rates) in bad loans—roughly 20 percent of total loans at the time—were taken off the banking system’s books and given to four asset management companies.\textsuperscript{12}

Efforts to clean up the banking system resumed in 2003, when $45 billion of the People’s Bank of China’s (PBoC) foreign currency reserves were transferred to two of the four state commercial banks—the China Construction Bank and the Bank of China—to increase their formal capital.\textsuperscript{13} In 2004, the PBoC bought RMB 320 billion ($39b) of bad loans from China Construction Bank (CCB) and the Bank of China (BoC) in 2004 at half their book value while the Ministry of Finance also

\textsuperscript{9} Several state-owned Indonesian banks were in bad shape prior to Indonesia’s crisis.

\textsuperscript{10} A “carve-out”—the transfer of bad assets to a third party at book value—avoids the need for the banks to take a hit to their existing capital. In a formal recapitalization, a third party has to inject funds in the bank after their initial capital has been written down. See Anderson, 2005a.

\textsuperscript{11} Admittedly, the government raised this equity by selling bonds to the banking system, and so the banks financed their own recapitalization in some sense.

\textsuperscript{12} In addition to taking the banks’ bad assets, AMCs also assumed some of the banks’ liabilities to the People’s Bank of China. As a result, both the central bank and the SCBs ended up with large claims on the AMCs. Early recovery rates on the bad loans transferred to the AMCs were around 30 percent of book value, but recovery rates subsequently fell to 15 to 20 percent of the book value. Formally, the finance ministry has not guaranteed AMC bonds (Ma, 2006)—but there is little doubt that taxpayers ultimately will need to bailout the AMCs (Anderson, 2005a).

\textsuperscript{13} The banks also reportedly have received a guarantee that central bank would protect the RMB value of their dollar-denominated capital should the dollar depreciate against the RMB.
wrote off its RMB 320 billion ($39b) equity stake in these two banks. This helped the banks cover the cost of writing down existing NPLs and provisioning against future NPLs.

In 2005, another $15 billion in foreign currency was transferred to a third bank—the Industrial and Commercial Bank of China (ICBC). However, this was a relatively small share of the state’s total effort to clean up ICBC. The finance ministry formally wrote down RMB 170 billion ($20.5b), or one-third of its existing equity in ICBC, while also chipping in another RMB 124 billion ($15b) in new capital (Ma, 2006).14 The PBoC purchased RMB 460 ($56b) billion in bad loans at par. An additional RMB 246 billion ($30b) in bad loans from the ICBC were parked in a “a joint MoF/ICBC special purpose receivable account” that “smacks of regulatory forebearance granted by authorities to themselves” (Ma, 2006).

Uncertainly over the precise scale of the removal of bad loans from the state commercial banks’ balance sheet is only one reason why the current health of the SCBs is difficult to assess. Uncertainty over the stock of NPLs on the balance sheet of the big four prior to the most recent round of recapitalization is the other. At the end of 2002, official estimates suggest that the big four state commercial banks had $252 billion in “legacy” bad loans (23 percent of their total loans). Informal estimates suggest that the big four could have had up to $395 billion of bad or otherwise impaired loans (40 percent of their loans).

Table 2 emphasizes NPL disposal rather than the NPL ratio. It assumes that half of the 2004 write down in the equity stake of the ministry of finance (MoF) in the Bank of China and China Construction was used to finance the write-down of NPLs and half to provision against future losses. It also assumes that the banks wrote down $15b of bad loans with their own profits in 2003, used $20b of profits to cover their share of the $40b purchase of bad loans by the PBoC in 2004 and wrote down an additional $20b in bad loans in 2005.15 The value of this approach is that it does not depend on the official estimates for the stock of NPLs.

14 Podpeira (2006) estimates that the MOF wrote down RMB 46 billion in equity in ICBC in 2005. Podpeira seems to combine two of Ma’s transactions—the write-down of a portion of the MoF’s existing equity (roughly RMB 170b) along with a RMB 124 billion ($15b) injection of new equity—into a single action. Both Podpeira and Ma report that two tranches of NPLs—one of RMB 246 billion and another of RMB 460 billion—also were removed from ICBC’s balance sheet.

15 This is a slightly smaller estimate that in Anderson (2005a). Anderson believes the banks set aside $12 billion to cover the costs of writing down $25 billion in bad loans in 2003. He estimates that they could have written down another $30–35b in 2004 and 2005.
Table 2 Estimated balance sheet of the “big four” state commercial banks

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
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</thead>
<tbody>
<tr>
<td>Total loans</td>
<td>986</td>
<td>1164</td>
<td>1190</td>
<td>1293</td>
</tr>
<tr>
<td>of which performing</td>
<td>592</td>
<td>795</td>
<td>869</td>
<td>1083</td>
</tr>
<tr>
<td>loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>of which loans</td>
<td>200</td>
<td>277</td>
<td>476</td>
<td></td>
</tr>
<tr>
<td>extended after 2002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NPLs</td>
<td>394</td>
<td>379</td>
<td>321</td>
<td>210</td>
</tr>
<tr>
<td>Estimated NPL disposal</td>
<td>15</td>
<td>58</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>of which MoF equity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>write down</td>
<td>19.5</td>
<td></td>
<td></td>
<td>10.5</td>
</tr>
<tr>
<td>of which MoF/ICBC</td>
<td></td>
<td></td>
<td></td>
<td>30.5</td>
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<tr>
<td>special purpose</td>
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<tr>
<td>vehicle</td>
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<tr>
<td>of which PBoC</td>
<td></td>
<td></td>
<td></td>
<td>19.5</td>
</tr>
<tr>
<td>purchases</td>
<td></td>
<td></td>
<td></td>
<td>57</td>
</tr>
<tr>
<td>of which SCBs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>profits</td>
<td>15</td>
<td></td>
<td></td>
<td>19.5</td>
</tr>
<tr>
<td>NPLs as % of total</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>loans</td>
<td>40.0%</td>
<td>31.7%</td>
<td>26.1%</td>
<td>16.3%</td>
</tr>
<tr>
<td>Memo item: RMB/$</td>
<td>8.28</td>
<td>8.28</td>
<td>8.28</td>
<td>8.07</td>
</tr>
</tbody>
</table>

Table 2 works off a higher initial stock of NPLs at the end of 2002 than in the official estimates—40 percent rather than the 26 percent in the official data. For the sake of simplicity, it also assumes that all loans extended after 2002 are currently performing.

It also should be noted that the RMB revaluation increased the dollar value of all RMB loans by about 2.5 percent in 2005.

Because of the higher NPL ratio in 2002, the remaining stock of NPLs implied by Table 2 is far higher than in the official data. The official data suggest an NPL ratio of closer to 10 percent, concentrated in the Agricultural Bank of China (Podpeira, 2006). However, the total estimated NPL disposal in Table 2, RMB 1560 billion ($193b at end 2005 exchange rates), is actually a bit larger the RMB 1080 billion ($134b at end 2005 exchange rates) fall in NPLs implied by the official data. The official data on NPLs includes new loans that have gone bad. But it is also likely that Table 2 slightly overstates total NPL disposal—whether by overestimating the share of the equity write-down that has been used to cover bad loans or overestimating the use of bank profits to write-off bad loans.

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16 Official data indicates that the stock of NPLs fell by RMB 186 billion ($22.5b) in 2003, RMB 395 billion ($47.7b) in 2003 and RMB 499b ($60.1b) in 2005, for a cumulative reduction of RMB 1079b ($130.3b at 8.278 RMB to the dollar; 133.6b at the end 2005 exchange rate). By comparison, my estimates were RMB 124b in 2003, RMB 480b in 2004 and RMB 957b in 2005. Since the removal of RMB 706b in bad loans from ICBC is not in doubt, there official numbers clearly include some new non-performing loans. See Podpeira (2006).
3.3 Strong lending growth

The substantial stock of bad loans on bank balance sheets in 2002 did not prevent the banking sector from extending large sums of new credit over the past 3 years. The initial pick-up in credit growth coincided with a set of broader changes. As Figure 1 shows, “hot money” started to flow into China in 2003 as “flight” capital started to “come home” in a big way (Prasad and Wei, 2005). This inflow initially was not sterilized, and led to a surge in both money growth and bank lending (Goldstein and Lardy, 2004).17

However, in the spring of 2004, the PBoC both introduced administrative controls to limit the pace of the increase in bank credit and stepped up its efforts to sterilize rapid reserve growth. As a result, the acceleration in credit growth in 2003 was not sustained, and the close link between rising reserves, money growth and the increase in bank lending observed in 2003 was severed (Green, 2005), see Figure 2.

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17 Lending had lagged deposit growth (deposit growth closely tracks m2 growth) for several of the years preceding 2003, and so in 2003 the banking system was able to finance credit growth in excess of (rapid) deposit growth by running down its holdings of other liquid assets. After administrative controls were tightened in 2004, deposit growth has consistently exceeded lending growth.
However, the slowdown in the growth of bank credit should not be overstated. Lending continued to grow roughly in line with nominal GDP growth, which was growing quite fast. More importantly, a large share of bank loans were not performing at the end of 2002. The increase in the banking sector’s overall stock of performing loans has been spectacular.

China has maintained a large “spread” between deposit rates and lending rates by capping deposit rates (the cap is currently 2.25 percent) while maintaining a floor on lending rates (banks can now lend at as high a rate as they want, but they cannot lend at a rate below 90 percent of the reference lending rate, which was raised from 5.58 to 5.85 percent in the Spring of 2006). As the share of NPLs on the bank’s balance sheet fell, bank profitability soared. Gordon Orr (2004) notes: “the government regulated interest rate spread between deposits and loans gives these banks an enormous margin, one of the largest in the banking world, and they are using it to write off bad debt. Regulators understand the importance of this interest rate spread, which will remain in place for several years.” Core banking indicators consequently are improving: profits are up, NPLs are shrinking and the number of banks reporting that they meet international standards for capital adequacy has expanded dramatically.

3.4 Risks from the recent lending boom

Nonetheless, reasons for concern remain. NPLs are a lagging not a leading indicator. According to many standard measures, the financial
sectors of the Asian tiger economies looked to be in robust health on the eve of the Asian crisis. The health of the banking system will increasingly depend on the quality of the roughly $900 billion in new loans the Chinese banking system extended over the course of 2003, 2004 and 2005. Unfortunately, there are plenty of reasons to question the quality of this new lending: the banking system remains under-capitalized, the central government has difficulties controlling the local activities of national and local banks, directed lending has not disappeared and opportunities for connected lending are growing along with the banking sector’s real estate exposure. Finally, the government’s desire to limit lending growth without raising interest rates has led it to rely heavily on administrative controls to allocate credit.

Each point is worth exploring in a bit more depth.

*The banks lack capital*

Despite ongoing improvements, the regulatory capital of the banking system still hinges largely on favorable accounting treatment of bad—and potentially impaired—loans. Some state enterprises can pay interest on their outstanding balance, so their loans are not formally non-performing. But they are unlikely to ever repay the principal on their loans (Anderson, 2005).

*Difficulties controlling the state commercial banks and regulating locally owned banks*

Individual bankers who work for the big four state commercial banks often have close ties to the local communist party or the provincial government, and they are often under strong pressure to lend. A surge in lending can boost local growth—whether by financing a new factory or financing a surge in real estate development. If the loans eventually go bad, the losses are born by the national government. Yet the degree of effective central supervision over the activities of the local branches of the big four state banks is still widely questioned.

Moreover, many of the rapidly growing and often locally owned joint stock commercial banks (JSCBs) and the major city banks have many of the same incentives to over-lend as the branches of the big state commercial banks. Most of these banks are owned by local authorities. Their management knows that a surge in local lending will contribute to a local boom. They also may assume that major future losses will be picked up by the national government, as many of these institutions may now be too big to be allowed to fail. The capacity of China’s new regulatory structure to supervise JSCBs and major city banks has not been tested.
Directed and connected lending

Most analyses focus on the risks of directed lending and specifically the use of the SCBs to make “policy loans” to maintain employment in state-owned enterprises (SOEs). No doubt such policy lending continues, but lending to SOEs now accounts for a declining share of total bank lending. Anderson (2005) estimates lending to SOEs accounts for only 35–40 percent of all new lending. Moreover, many of the remaining SOEs are profitable firms in their own right, as the least profitable (“iron ricebowl”) SOEs were shut down in the late 1990s. Podpiera (2006) is less sanguine, as he finds little evidence that either enterprise profitability is related to lending by state banks or the state banks are charging more for risk.

Connected lending—driven by the tight ties between local governments, local banks (both the rapidly growing JCSBs and the local branch of the state bank) and local firms, may now be as big a risk as directed lending. Unlike in Indonesia and Thailand, the typical Chinese “commercial” bank is not owned by a family conglomerate. However, the local government often owns both stakes in the local banks and stakes in a large number of local enterprises. Leading private entrepreneurs often have close ties to the local government as well.

Real estate exposure

Real estate lending grew faster than total lending in both 2003 and 2004. The PBoC (2005) estimated that “property” lending accounts for about 15 percent of the total stock of RMB-denominated bank loans at the end of 2004. Prices in the most extended market—Shanghai—fell in 2005, but continued to rise in other cities.18 The banks are doubly exposed to the real-estate sector: they lend both to China’s real estate developers and to the “consumers” of real estate through the mortgage market (Trinh, 2005). Problem real estate loans in the state commercial banks started to rise in the first quarter of 2005 (MacDonald, 2006). Recent estimates put the total exposure of the SCBs at 20–30% of total lending (World Bank, 2006b).

It is sometimes argued that real estate is a “sure thing” in China, given the large rural population that is likely to migrate to urban areas

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18 China’s central bank reports real estate prices increased by between 14-15% in 2004. Prices in Shanghai fell in 2005 after a series of policy steps to deflate the Shanghai boom. Property prices elsewhere have continued to rise, though the overall rise in property prices arguably is in line with rising local incomes. The latest (February 2006) data from China’s national bureau of statistics shows a 5.5 percent average y/y increase in the average selling price in China’s 70 “median and large” cities. Shanghai prices are down 1.1 percent; but prices in Shenzhen, Guangzhou and Beijing are all up (G7 Group, 2006).
over the next 20 years. Yet, both Thailand and Indonesia still had a large rural populations in 1997. It is possible to over-land and over-build even in a growing market. In Bangkok and Jakarta, the supply of commercial real estate increased by between 500 and 800 percent between 1990 and 1997 (Caprio, 1998), laying the groundwork for the subsequent bust. China faces a similar risk. According to the Asian Development Bank (ADB, 2006), investment in residential real estate grew by nearly 20 percent in 2005.

**Heavy reliance on administrative controls to limit credit growth**

The Chinese government caps the rates that banks can offer depositors and sets a minimum interest rate on the bank lending, guaranteeing the banks a substantial spread so long as their loans perform (Garcia Herrero and Santabarbara, 2005). The Chinese government has been reluctant to raise the basic lending rate, in part because higher lending rates would jeopardize the health of certain state enterprises. The available evidence suggests that most firms continue to borrow at a rate close to the reference rate (Podpiera, 2006).

While credit is more expensive in real terms than in 2003 or early 2004, it remains far cheaper than it was in say early 2002, when real interest rates were above 6 percent (Goldstein, 2005) Current nominal interest rates seem low relative to nominal GDP growth, which was has not been below 13 percent since 2003 (World Bank, 2006a). Consequently, demand for loans is quite strong, forcing bank regulators to rely on administrative controls to reduce the rate of credit growth. Prasad and Rajan (2005) have noted the following:

In the face of capital inflows and pressures for [exchange rate] appreciation, the government is forced to keep interest rates low. This implies cheap, subsidized capital to banks and companies. The government then has little choice but to use administrative measures such as moral suasion to control growth in lending and investment. This is not consistent with training the banking system or state enterprises to respond to market incentives.

There is a real risk that available credit is going to projects with strong political backing, not necessarily to those projects that pose the least risk to the bank.\(^{19}\)

\(^{19}\) Anderson (2005a) argues that administrative controls may be necessary in the face of other distortions: “Keep in mind that in an economy with heavy state ownership and influence, the interest rate may not be best tool for macro control. For example, if regional government officials are promoting inefficient investment projects through...
3.5 Foreign investment is no panacea

Foreign strategic investors now have strategic stakes in three of the four SCBs and in many JSCBs. However, this investment came too late to have a substantial impact on the banking sector’s current loan portfolio, which reflects loans made prior to their equity investments.

While China has made a serious effort to improve the balance sheet of the state banks, it seems unlikely that foreign strategic investors bought stakes in the state commercial banks because they liked their current balance sheets. Rather, they are looking to strengthen their relationship with the China’s government and position themselves to profit from China’s future growth. Some hope their investment generate future investment banking business. Others are looking to develop credit card franchises (Podpeira, 2006). In the near term, all also benefit from the large spread between Chinese deposit and lending rates. In the long term, all believe that they have bought an option that will pay off in a large way should China’s successfully transition to a more commercial banking system.

China’s central government no doubt hopes that foreign investors will help it exert more effective control over the far-flung activities of the big commercial banks. However, the relatively small stakes held by foreign investors do not provide them with operational control over the banks activities. Moreover, foreign investors’ incentive to reign in the SCBs may be weakened by the expectation that the state will protect strategic investors from large losses. Several strategic investors reportedly have the right to sell their stake back to the state in the event that the banks’ balance sheet proves worse than expected. The World Bank (2005b) noted: “The inclusion of protective and exit clauses in several transactions, which, if triggered, would exempt the foreign strategic investors from hidden losses may reduce diligence.”

3.6 The future of China’s banking system

hinges on the quality of recent lending

In many ways, the China’s recent lending boom can be seen as one huge (and state-sanctioned) gamble for resurrection. If most of the new loans turn out to be performing, the banking system has a chance of lending itself into solvency. However, if a substantial fraction of the loans extended in the recent lending boom go bad, a banking system that already
was technically bankrupt just becomes more bankrupt—leaving taxpayers with an even larger losses.

Goldstein (2004) notes that roughly 40 percent of the loans made in past Chinese lending bubbles ended up as NPLs. Others (Podpiera, 2006) suggest a higher fraction went bad. Anderson (2005) argues that a far lower fraction of new loans will go bad this time around. Given the scale of the recent lending boom, however, that is scant comfort. About half of the total performing loans in the banking system have been extended in the past 3 years.

Table 3 builds on the information presented earlier in Table 2. While Table 2 looked only at the state commercial banks, Table 3 looks at the overall banking system. Like Table 2, it assumes that the stock of bad loans in the banking system in 2002 was far higher than the government officially reported and it assumes that no loans extended since 2002 have gone bad. It includes an estimate of the NPLs removed from the balance sheets of the SCBs but not an estimate of the scale of (ongoing) efforts to clean up the balance sheets of the rural credit cooperatives (RCC). Consequently, it no doubt overestimates the amount of NPLs that remain on the balance sheet of the banking system.

It also recognizes that bad loans removed from the banks books do not go away. Many have been shifted to the books of AMCs. Others have been bought by the PBoC and then sold (sometimes at a discount) to the asset management companies. Since recovery rates on the bad loans held by the asset management companies have often been barely enough to cover the AMCs operating expenses, China’s government eventually will need to write a check to the bailout the asset management companies.

Table 3 puts the total cost of cleaning up remaining bad loans and bailing out the AMCs at close to 30 percent of China’s 2005 GDP. A low-end estimate—one that assumes that the government needs to bailout the AMCs for their 1999 tranche of bad loans (but not subsequent rounds of bad loans it has bought from the PBoC) and cover $300 billion rather than $450 billion in legacy NPLs—would put total recapitalization costs at closer to 20 percent of China’s 2005 GDP. Some of these

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20 The official data suggests a very low fraction—something like 2 percent—of recent loans have gone bad. See Podpeira (2006).

21 Korea’s bank bailout cost around 20 percent of its GDP, Thailand’s between 30 and 35 percent of its GDP and Indonesia’s bailout cost a staggering 50 percent of its GDP—though these estimated cost may fall if the countries are able to recover more value from the portfolio of bad loans their respective governments assumed in the crisis (Hoelscher and Quintyn, 2003).
costs have already been realized. But clearly most have not. China’s government has been far more willing to remove NPLs from the banks’ balance sheets than to recognize losses outright.

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Ma (2006) estimates that the state has already committed RMB 4 trillion (roughly $490 billion at end 2005 exchange rates) to remove bad loans from the banks—far more than is commonly realized. In addition to the recapitalization of three of four state commercial banks, Ma reports that the PBoC has financed equity injections into the rural credit cooperatives by selling central bank bills—whose interest costs can be...
These estimates, though, are very rough. They do not factor in the potential for asset management companies to recover more on future NPLs than they have recovered on their existing NPL portfolio. Nor do the fully account for government’s ability to use the operating profits of the banking system and the central bank to cover some bank recapitalization costs.23

In addition, China’s government will likely need to pick up the bill for a new round of bad loans. If 15 percent of the new loans extended over the past 3 years go bad, the total stock of NPLs would rise by $144 billion (a bit under 7 percent of China’s 2005 GDP). If 25 percent go bad, the increase would be more like $250 billion (around 11 percent of China’s 2005 GDP). Over time, barring an improvement in the quality of credit extended by the banking system, these totals will only increase.

4. China’s external strength—and its external vulnerabilities

4.1 China lacks the external vulnerabilities of the Asian tigers

China does not lack external vulnerabilities, but its external vulnerabilities are completely different from those of the Asian tigers. China simply has not made the Asian tigers’ mistake of financing ongoing current account deficits with short-term interbank debt—as Figure 3 shows.

This reflects two key differences between China and the Asian tigers. First, China generally has been open to foreign direct investment while otherwise maintaining a heavily regulated capital account; many Asian tigers blocked foreign investment while liberalizing short-term cross-border bank flows.

Second, China has not relied—in aggregate—on foreign savings to finance its investment boom. As Figure 4 shows, savings have grown even faster than investment. Large FDI inflows have been used to build up reserves, not to finance current account deficits.

Indeed, counting private external assets, China net international investment position is now positive.24

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23 Paying interest on recapitalization bonds and foregoing profits from the state’s equity ownership of the banking system amount to the same thing. One shows up as higher expenditure, the other as less revenue.

24 Reserves—including reserves transferred to the state banks—rose to approximately $889 billion at the end of 2005. China’s external debt totaled $287 billion in the middle of 2005. The stock of FDI in China is estimated at $621 billion. Any reasonable estimate of offshore private Chinese assets leaves China with a positive net international investment position. See David Dollar and Aart Kraay (2005).
In many ways, China’s external vulnerabilities are the opposite of the Asian tigers’.

Private financial institutions in the Asian tigers were vulnerable to a currency depreciation as a result of their external borrowing. Private Chinese banks do not have comparable exposure—either directly, from an...
open position, or indirectly, from lending in foreign currency to domestic firms that lack export revenues. Dollar liabilities have been matched with dollar assets25 and total dollar lending by Chinese banks—whether funded from household dollar deposits, business dollar deposits or external credit lines—remains modest (Prasad, Rambaugh and Wang, 2005).

The central banks of Asian tigers generally held too few reserves relative to their country’s short-term external debt; China’s central bank, conversely, holds far more reserves than it needs—and preventing RMB appreciation requires that it keep adding to its reserves. Since the Government of China’s external assets far exceed its external debts (including contingent foreign currency liabilities in the banking sector), its external balance sheet would be hurt by an appreciation, not by a depreciation.

Risks include:

(i) The growing mismatch between the central bank’s foreign currency denominated assets and its domestic currency denominated liabilities, whether cash or sterilization bills. RMB appreciation (dollar depreciation) consequently would reduce the renminbi value of the central bank’s assets, while the RMB value of its liabilities would remain constant. The PBoC’s potential capital losses from a significant appreciation of the RMB are quite large (Roubini and Setser, 2005), though the consequences of “paper” losses and negative “paper” equity for a central bank are widely debated.

(ii) A surge in the interest rate the central bank has to pay on its sterilization bills. In order to prevent rapid reserve growth from resulting in excessive money growth, the central bank has to constantly sell central bank debt to remove some of the RMB its sells for dollars from circulation. This implies that the outstanding stock of central bank sterilization bills is rising rapidly. The risk facing the central bank is simple: at some point, it may have to pay much higher interest rates than it does now both to place new sterilization bills and to refinance its existing stock of sterilization bills.

The banking system as a whole faces precisely the opposite risk as the central bank. Over time, central bank bills will account for a larger and large share of the banking system’s total assets and,

25 Household dollar deposits have been falling recently as Chinese citizens shift their savings into RMB. The PBoC reported that domestic foreign currency denominated deposits fell by about $4 billion, between November 2003 and November 2004, though rising corporate dollar deposits and growing external liabilities offset falls in household deposits. See PBoC, January 2005.
if PBoC bills continue to pay little more than the banks pay on their deposits, the banks’ profitability will decline. This is precisely what happened in 2005: Administrative controls have kept bank lending from keeping pace with the increase in bank deposits, generating demand for PBoC sterilization bills. In effect, lending controls have pushed the costs of sterilization off the books of the central bank and onto the books of the (state-owned) banking system.

(iii) Over-lending to the export sector in domestic currency. Firms with domestic currency revenues and foreign currency debts often face trouble in the event of a currency depreciation. The opposite is also potentially true: firms with foreign currency revenues and domestic currency debts are at risk in the event of a currency appreciation.

Since China’s export sector grew from roughly 20 percent of China’s GDP in 2001 to a bit under 35 percent of China’s GDP in 2005, this risk is not entirely theoretical. However, there are also reasons to think that this risk remains manageable. Chinese exports have lots of imported content, and a revaluation would reduce the RMB cost of imported inputs as well as the revenue stream associated with a given quantity of exports. In sectors where Chinese firms compete largely against other Chinese firms, Chinese firms should be able to raise their dollar prices to reflect changes in the RMB/$. Other firms compete against firms located in other Asian economies whose currencies likely would move in tandem with the RMB. Finally, foreign firms play a particularly large role in the export sector and, partially as a result, the export sector likely relies less on bank credit than other sectors.

4.3 Banking crisis indicators derived from countries with different external vulnerabilities may not work in China

Attempts to identify early warning indicators for systemic banking crises have been hampered by the enormous diversity among different banking crises. This is likely to be particularly true for China.

Many studies have found that real exchange rate appreciation is a leading indicator of systemic banking crises, perhaps because currency crises and banking crises are often closely linked (Demirguc-Kunt and Detragiache, 2005). In both emerging Asia (in 1997–1998), Argentina (2000–2001) and Uruguay (in 2000–2002), extensive foreign currency denominated liabilities and assets combined with an exchange rate depreciation to generate crises. Other studies have found a correlation between banking crises and low GDP growth, high real interest rates and high inflation.

This literature suggests that China has little risk of a crisis. However, the enormous differences between China and typical emerging economy
may limit the utility of cross-country comparisons. Demirguc-Kunt and Detragiache’s review does suggest note of caution: “high-lagged credit, which may capture a credit boom, is significantly and positively correlated with the probability of crises in all specifications.”

5 What could trigger renewed banking trouble?

The immediate trigger for a Chinese banking crisis is sure to be quite different than in the Asian crisis economies. China is simply not vulnerable to an external run. The risks to China’s banking system lie elsewhere.

5.1 A domestic run

China’s banks, like banks everywhere, are potentially vulnerable to a run. This risk seems real for many smaller financial institutions. A local scandal—for example, the revelation that the banks had been effectively plundered by local officials who pushed the bank to lend heavily to an (unprofitable) local firm—could trigger a run on many of China’s smaller banks. Many smaller banks also may be very exposed to a downturn in the local property market. But a run on a single institution is manageable, particularly if depositors who pulled their funds out of smaller bank ran toward the (relative) safety of the big four SCBs.

A systemic crisis—a generalized run out of the entire banking system—would pose far larger problems. However, a large stock of NPLs alone is insufficient to generate a run. Historically, depositors in the state banking system have not taken losses no matter how badly the banks invest those funds. So long as China’s depositors retain confidence in the state’s guarantee, they will have no more reason to run out of China’s banking system in the future than they did in 2002.

Strong recent deposit growth is not simply the product of a lack of alternatives. Chinese citizens with savings abroad—and access to a full range of financial assets—are currently moving their savings back into China. At the same time, China’s remaining capital controls do further reduce the risk of a general run. Depositors who pulled funds out of the banks would have to place their funds somewhere, and China’s capital controls assure that most of those funds would stay in China.

China’s commitment to allow foreign-owned banks full access to its domestic market in 2006 raises the possibility that depositors could leave the state banking system for the relative safety of foreign-owned banks. In the short run, though, this seems like a remote possibility. China’s government seems intent on making it difficult for foreign banks to build their own branch network quickly; it wants foreign banks to take stakes in existing Chinese banks instead. Moreover, foreign banks lack the capacity
to immediately expand their lending in the face of a surge of deposits. The central bank consequently would likely find ways to recycle the spare RMB in the financial system back to weaker banks.

At least in the near term, a general—rather than a local—deposit run seems unlikely. However, this assessment is subject to one important caveat. The run on the Indonesian banking system was triggered in part by concerns that Suharto’s regime was losing its grip on power. Small depositors who kept their savings in banks owned by “cronies” with close ties to Suharto lost confidence that the government would stand behind bad banks just because of the political ties of the bank’s owners. Interest and individuals favored under the old regime started to shift their savings abroad. In the unlikely event that the Chinese communist party’s grip on power in China is seriously questioned, Chinese depositors would have strong incentives to run.

5.2 A sharp deterioration in the banks’ loan portfolio

China’s main financial vulnerabilities lies on the “asset side” of banking system’s balance sheet. Potential shocks that could lead to a surge in NPLs include:

(i) A shock to Chinese real estate prices. Over investment could lead to over-supply, rising inventories of unsold (and unrented) properties, and ultimately to sharp falls in the real estate market.

(ii) Falling prices for some key goods. If too much capacity chases too little demand, prices will fall—and some of the loans made to finance the surge in Chinese industrial capacity could go bad. The increase in China’s production capacity over the past few years has been absolutely enormous. Between 2002 and 2004, Chinese steel production has increased by 50 percent, car production doubled and computer production tripled.\(^{26}\) With investment now close to 50 percent of China’s (revised) GDP—and still increasing at a faster rate than the overall economy—similar increases in capacity can be projected in the future. The challenge will be finding sufficient demand to absorb all of this new capacity. The World Bank (2005a) notes: “Another risk is that investment is not reigned in sufficiently in industries facing potential excess supply and further pressure on profitability and prices, that this would lead to oversupply, deflationary pressures, corporate sector balance sheet problems and a new round of non-performing loans.”

\(^{26}\) Avery, 2005.
(iii) A shock to China’s exports. Exports have almost doubled as a share of China’s GDP over the past 5 years, substantially increasing China’s exposure to the global economic cycle. Too many firms may be betting that 30 percent year over year growth in exports can continue.

A shock to the asset side of the banks’ balance sheet would lead to a surge in NPLs. In some sense, though, this is not a crisis: it would just mean that China’s banking system is back where it was a few years ago. However, it could lead to the resumption of the capital outflows of roughly $50–60 billion a year were typical from 1998 to 2000 as well as a shift in existing deposits from fast-growing JSCBs to more conservative SCBs. Even if administrative controls that now cap bank lending were lifted, a sharp slowdown in deposit growth would imply that overall bank lending could fall substantially, compounding the initial shock.

Ironically, steps to encourage the banks to move toward market-based lending could enhance this risk. Purely state run banks can ignore rising NPLs and an eroding capital base; more commercially oriented banks can not.

5.3 A less supportive external environment

China’s investment boom, as discussed earlier, has not led to current account deficit or to an appreciation in the real-effective exchange. This has limited China’s vulnerabilities to Asian-style shocks. But it also has left China in a position where it may not be able to rely heavy on external demand to help buffer China’s economy in the event of a domestic slump. Having resisted RMB appreciation during its boom, China should not count on being able to allow the RMB to depreciate should China’s economy slow.

During the Asian crisis, the US acted as the world’s importer of last resort, helping to pull the Asian tigers out of recession. However, the expansion of the US’ current account deficit since 2000—US deficit reached 7 percent of US GDP in the fourth quarter of 2005—reduces the US’ capacity to play a similar role should China’s boom falter. In principle, Europe could take over the US role as the world’s importer of last resort, allowing its current account deficit to expand should China’s surplus start to rise during a slowdown.27 But Europe’s capacity to take on this role is untested.

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27 One potential source of adjustment: a Chinese slump might lead to a fall in commodity prices, and thus a fall in the current account surplus of the commodity exporters, and a rise in the surpluses/fall in the deficit of commodity importers.
6. Conclusion

China’s current growth has been based on the rapid expansion of sectors of its economy that are already well-developed: investment and exports have grown far faster than the overall economy (World Bank, 2006b). Yet, the longer this pattern of expansion continues, the bigger the future risks. Both China’s internal imbalances and the imbalances in the global economy are now becoming large. Investment and exports now account for a very large share of China’s (revised) GDP. Some recent work suggests a sharp fall off in the marginal productivity of capital and total factor productivity (Hu, 2005; IMF, 2005).\(^{28}\) In this dimension China looks like the “Asian miracle” that went bust in the 1990s: high growth has been driven more by growth in factor inputs (notably the rapid accumulation of capital from very high rates of investment) than by growth in total factor productivity.

Yet despite a similar pattern of investment-led growth and a similarly bank-dominated financial system, China is not vulnerable to a replay of the Asian financial crisis. A roll-off of short-term external credit would lead to nothing more than a welcome reduction in the central bank’s reserves. An (unlikely) currency depreciation would not lead to a surge in non-performing foreign currency loans in the banking system. China’s balance sheet vulnerabilities lie elsewhere, notably on the central bank’s exposure to RMB appreciation the potential mismatch between firms’ RMB debts and dollar-denominated export revenues.

However, banks can get into trouble without taking on any currency risk. Historically, the rapid expansion of RMB denominated credit—not foreign currency lending—has caused trouble for China’s banks. Many recent loans will perform so long as China’s banks continue to lend, Chinese firms continue to invest and the economy continues to boom.

Most cyclical upswings, unfortunately, are followed by cyclical downturns. China is unlikely to be able to sustain its current pace of investment growth. Export growth is likely to slow as well, if for no other reason that the sheet size of China’s current exports makes a continuation of current growth rates increasingly difficult. At some point, the current virtuous cycle—fast lending growth leads to new performing loans, rising bank profits and a fall in the banks’ NPL ratio—could turn vicious. Deterioration in the quality of the asset side of the banks’ balance sheet could lead to a slowdown in new lending. A surge in domestic

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\(^{28}\) Prof. Hu notes that the low cost of capital also creates an incentive to substitute capital for labor, and thus works against China’s attempts to create jobs for underemployed rural workers migrating to the cities.
Chinese consumption potentially could offset a fall in investment, helping to sustain growth. But history also suggests caution. In the past, consumption growth has been correlated with investment growth (Goldstein and Lardy, 2004).

China’s capacity to re-orient its economy to rely more on domestic consumption will likely be put to the test at some point—along with the ability of its still-developing financial system to manage the transition.

References


International Monetary Fund (2001), Thailand. Article IV Consultation – Staff Report, Washington: International Monetary Fund.


People’s Bank of China (2005), “Foreign currency deposits continued to increase”.


