

China's Bad Loan Problem

The pervasive extent of bad loans in the China's banking system has received much attention in the aftermath of the Asian financial crisis. But given the varied causes and characteristics of bad loans in China, figures on the extent of bad loans by themselves provide little information. An alternative perspective focusing on the net claims of households against the state sector (state-owned enterprises, governments, and state-owned banks) argues that bad loans simply reflect a "financial hole" in the state sector; placing this financial hole in the balance sheets of the state-owned banks is a decision of convenience. Current attempts in China to resolve the "bad loan" problem partly acknowledge this fact, but remain insufficient given the scope of the bad loan problem and inappropriate considering the difficulties in identifying the true quality of the loan portfolio. They furthermore do not establish mechanisms that safeguard sound banking in the future.

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Introduction

In the aftermath of the Asian financial crisis China's financial system has come under scrutiny. Much attention has focused not only on the question of whether China's quasi-pegged exchange rate will hold, but also on the problems in China's domestic financial sector. A major concern is the extent of bad loans in the banking system. As early as 1995 a member of the central Party school suggested that "according to today's most conservative estimate," the share of non-performing loans and unpaid interest in all bank loans is about 25%; "some scholars even think this figure to be around 47%." And further, "I think that if asset stripping, 'eating out of the banks' rice bowl,' and debt evasion are not effectively curbed, the share of non-performing loans and unpaid interest can very quickly reach 60-70%. If this happens, it will endanger the safety of the whole banking system." (Zhou 1995, 1f)

Various procedures to resolve bad loan problems are available, ranging from recapitalization and bank liquidation of banks to debt-equity swaps or the establishment of a resolution trust company to dispose of the bad loans.¹ For the case of China in particular, Lardy (1998) has argued for the recapitalization through the injection of government bonds that has been implemented in August 1998.² Within China, the academic discussion about how to solve the bad loan problem is remarkable mainly for its absence. The leading economic journal, *Jingji yanjiu*, did not cover the subject once throughout 1997 and 1998.³ The Asian financial crisis is

¹ The applied literature on bad loan problems provides (i) broad characteristics of what makes a banking system sound (for the general case, see, for example, Enoch and Green 1997, and for the East Asian case Basu 1997); (ii) analysis of recent cases of bank restructuring, including country studies, and the development of recommendations (Dziobek and Pazarbasioglu 1998, Alexander et al., 1997, Cole and Slade 1996, and Sheng 1996); and (iii) detailed directions on how to handle bad loans within banks (Beattie et al. 1995, and Hale 1983).

² Lardy (1998, Chapter 4) explores the feasibility of several methods to resolve the bad loan problem, concludes that recapitalization is the most appropriate method for China, and calculates the costs of such a recapitalization depending on the fashion in which it is implemented.

³ A number of survey reports in, for example, *Jinrong cankao* describe the financial situation in one particular locality. Many of these survey reports are quite candid about the extent of bad loans in a locality and may have been written with the purpose of attracting the attention of economic policy

acknowledged but irrelevant for China as China is enjoying rapid and healthy economic growth under successful macroeconomic management (Liao 1998). The existence of bad loans is openly admitted in the official central bank journal, *Zhongguo jinrong*, and generally attributed to the fact that China's commercial banks are far from "true" commercial banks (Wang 1998). Discussion focuses on the sources of bad loans and general recommendations for improvement, such as a separation of banks and the finance ministry, increased independence of enterprises from governments and "better" lending decisions in the future.⁴

This paper, after providing a definition of bad loans and an estimate of their extent, first takes a step back and questions whether the concept of bad loans is fully applicable to an economy in transition (third section). In the case of China, any of the presently used measures of bad loans is unlikely to provide an exact estimate of the extent of bad loans. From an alternative perspective (fourth section), the extent of bad loans in a socialist economy, independent of how it is measured, reflects little more than a political decision on where to locate an increasing hole in the state sector balance sheet. Government-determined policy loans could equally well enter the accounting system as bank loans to the government, as Wu (1996) has suggested to "solve" the bad loan problem, or as a budget deficit.

Present financial reform measures in China favor large-scale government-financed debt forgiveness, acknowledging government responsibility for the accumulated bad loans (fifth section). But these measures remain insufficient given the scope of the bad loan problem, and inappropriate considering the difficulties in identifying the true quality of the loan portfolio. Furthermore, without fundamental changes in the way the economy operates, these measures are unlikely to provide a long-term solution to the bad loan problem.

makers to the issue. The frequency of reports on bad loan problems has abated after 1996 perhaps as policymakers began to grapple with the issue and to downplay its extent and implications.

⁴ See, for example, Song (1998) and Hu and Wang (1998).

China's financial system consists of the central bank, four state commercial banks, rural and urban credit cooperatives (the latter in some localities unified in an urban commercial bank), other nationwide or regional commercial banks, three development banks, finance companies and trust and investment companies. The four state commercial banks, Industrial and Commercial Bank of China (ICBC), Agricultural Bank of China (ABC), Bank of China (BoC) and Construction Bank of China (CBC) together accounted for 70% of total lending by all financial institutions to non-financial institutions in mid-1998, the urban credit cooperatives for 5%, and the rural credit cooperatives (RCCs) for 10%.⁵ The four state commercial banks as well as the central bank, the People's Bank of China (PBC), are directly owned by the State Council (SC). All other financial institutions are owned by state-owned enterprises (SOEs), the four state commercial banks, or lower-level tier governments and government departments, apart from the RCCs which are presumably owned by farmers but in practice under direct administration of the PBC.

⁵ See PBC Quarterly Statistical Bulletin 1998-3, 18, 20, and 24.

Bad Loans and Their Extent

“Bad loans,” or “problem loans,” or “unhealthy loans” in China come in three types: overdue loans (*yuqi daikuan*), doubtful loans (*daizhi daikuan*), and loan losses (*daizhang daikuan*). According to the most recent credit regulation issued by the central bank (PBC 28 June 1996, Art. 34), loans are categorized as overdue if they have not been repaid by the due date.⁶ Overdue loans automatically turn into doubtful loans after two years. The Finance Ministry (FM) on 29 May 1998 requested to reclassify after one year already, but the banking system has not yet responded with relevant regulations of its own. Overdue loans also turn into doubtful loans within the two-year period if the borrowing unit has already stopped production on an investment project or terminated its business. Doubtful loans finally turn into loan losses if one of several conditions is met, one of which is enterprise bankruptcy. (See Table 1 for the detailed criteria.)

In April 1998 the PBC announced a movement to clean up bank assets nationwide and to improve the loan categorization.⁷ The cleaning up began in Guangdong Province on 7 May 1998 on a trial basis and was to last until July. All policy banks, state commercial banks, other commercial banks, and urban commercial banks were to begin in August 1998 and to complete the process by the end of the year. Trial guiding principles on a new loan categorization system based on the internationally standard five categories Pass, Special Mention, Substandard, Doubtful and Loss were passed at the same time (see Table 1).⁸ However, while this reform has the support of

⁶ In practice, however, an earlier arrangement in the financial accounting system issued by the Finance Ministry (FM 1 July 1993, Art. 41) may still take precedence; here loans are formally classified as “overdue” only if they have not been repaid within six months of the due date. Recent articles such as Bai 1998 still refer to the earlier practice.

For a detailed list of all regulations cited in this article and their sources please contact the author.

⁷ See PBC 20 April 1998 (Regulation no. 150). This is the first time the PBC regulated on bad loans; previously this was an exclusive matter of the Finance Ministry. See *Jinrong shibao* 6 May 1998 and 1 Aug. 1998.

⁸ See PBC 20 April 1998 (Regulation no. 151).

With support from the World Bank the PBC auditing department has been gaining experience in applying the new categorization on a trial basis since 1993. Under guidance from Price Waterhouse the

the SC, the traditional categorization has not been abandoned immediately. Both categorizations are to be maintained concurrently. The FM as “owner” of the policy and state commercial banks as recently as on 29 May 1998 maintained the traditional classification.

Estimates of the extent of “bad loans” in China range from a low of 20% to a high of about 50%.⁹ The 20% estimate tends to cover only doubtful loans and loan losses (see, for example, Chen and Cong 1997), while the higher estimate usually includes overdue loans (Xia 1996 estimates the “unhealthy assets” of the four state commercial banks to be equal to approximately 40% of total assets). Official estimates give an unhealthy loan ratio of about 20% in early 1998 with 6 to 8% unrecoverable.¹⁰ Foreign credit rating agencies tend to list higher figures. For example, Moody’s offered an estimate for year-end 1996 of 35 to 70%.¹¹ Standard & Poor in mid-1998 suggested 200b USD, equivalent to approximately 22.42% of total lending by all financial institutions in China.¹² Such rates do not pertain uniformly across the country. Problem loans tend to be concentrated within the banking system in those financial institutions burdened with policy loans extended for particular purposes. They also tend to be concentrated geographically in the less developed regions; these are the low-income interior provinces as well as individual poor localities in better-off provinces.¹³

Bank of Communications, a small nationwide commercial bank, has begun using the new categorization in 1993 or 1994. In recent years the new categorization has been promoted at numerous occasions, including at workshops for bank employees. The PBC as of 1997 had produced its own guidebook for applying the five categories. (Wang 1997, *Jinrong shibao* 13 Dec. 1997)

⁹ China’s bad loan ratio compares to a 30% non-performing loan ratio for Mexico at the peak of its non-performing loan problem. Similar ratios may be reached in Thailand, Indonesia, Malaysia and South Korea in the aftermath of the Asian financial crisis. (*The Economist* March 7th, 1998, pp. 9, 10)

¹⁰ See *Ming Pao* 22 April 1998 quoting the PBC governor Dai Xianglong. A similar quote of Dai Xianglong in *Ming Pao* 17 January 1998 mentioned 25%.

¹¹ See *Xinbao* (Hong Kong Economic Journal, a newspaper) 30 July 1998.

¹² See *Xinbao* 5 Aug. 1998, PBC Quarterly Statistical Bulletin, 1989-3, 14.

¹³ On the regional, bank-specific, and project-specific distinctions see, for example, Shandong (1995) or Hu and Wang (1998).

Table 1. Bad Loan Categories

Traditional loan classification

Overdue loans

Loans not repaid at due date. (PBC 28 June 1996)

Doubtful loans

Loans not repaid within the time limit set by the FM (in the case of the ICBC, 2 years; ICBC 24 May 1996), or borrowing unit has stopped production (or terminated its business), or construction of the investment project has been stopped (PBC 28 June 1996)

Loan loss

One of the following conditions is fulfilled (FM 8 July 1988):

1. Borrower and guarantor have been declared bankrupt in accordance with the law; loan cannot be repaid after liquidation.
2. Borrower died or has been declared missing or dead in accordance with the civil law; loan cannot be repaid after liquidation of borrower's assets.
3. Borrower has experienced a major natural disaster or accident with very large losses for which no insurance can be claimed, and the loan (or parts thereof) can truly not be repaid, or the insurance claim is insufficient to repay the loan.
4. Overdue loans have been especially approved by the SC to be written off.

New trial categorization (PBC 20 April 1998, regulation no. 151)

Pass (Normal)

Borrower can fulfill contract, interest and principal will be paid on time.

Special Mention (Watch)

Borrower at present has the capability to pay interest and principal, but factors exist which may have a negative influence on the ability to repay the principal.

Sub-standard

The ability of the borrower to repay interest and principal is clearly in doubt; based on the borrower's regular income interest and principal cannot be paid.

Doubtful

Borrower is incapable of fully paying interest and principal; mortgages or guarantees, if they exist, are insufficient .

Loss

After exerting all possible efforts and following all legal procedures interest and principal cannot be paid, or only paid in small part.

The Concept of "Bad Loans" in the Case of China Carries Little Meaning

China's concept of bad loans has severe technical flaws. China's traditional bad loan categorization distinguishes primarily according to a time criterion. A loan turns overdue if it is not repaid on time. (Likewise, a loan turns doubtful if it has been overdue for more than one year.) Before the loan matures, no piece of information on the loan or the borrower can reduce the quality of the loan. If a borrower fails to repay one of several loans, this does not affect the qualification of the other loans. Not even the inability to pay interest matters. Once a loan turns overdue, no distinction is made according to the probability of repayment, no allowance is made for partial repayment, and no loan-specific provisions can be raised.¹⁴

The PBC requires overdue loans to not exceed 8% of all loans, while the limits for doubtful loans is 5% and for loan losses 2%; if these limits cannot be maintained, the bank must provide the PBC with a year-by-year estimate of its future trend of unhealthy loans (PBC 15 Feb. 1994). This creates incentives for banks to understate the extent of bad loans. For example, an investigation of the accounts of the ICBC branch in Linqing Municipality (Shandong Province) showed that the actual share of non-performing loans was above 80%, rather than the 40.5% acknowledged in the accounts (Shandong 1995).

These technical issues suggest not only a notion of bad loans that differs from the notion common in market economies, but also a severe underestimation of the actual extent of bad loans. The new 5-category loan categorization once fully operative may resolve some of the technical problems, but a number of further issues raise questions about the meaning of bad loans in China. On the one hand, the actual extent of bad

¹⁴ Loan losses cannot be written off as they accrue, but only up to a pre-determined limit of 1% of the volume of loans outstanding at the end of the year, assuming profits allow the creation of such provisions. Each loan write-off, independent of size, must be examined and approved by the same-tier representative of the central FM. Then the write-off is reported up within the bank to the headquarters for examination and approval. Each bank headquarters reports the loan loss to the FM and the central bank. This complex procedure had become necessary in 1994 because local governments were forcing bank branches into writing off loans to those enterprises favored by the local government, at times independently of whether these loans were already categorized as loan losses by the bank or not.

loans is in some respects underestimated, but in other respects overestimated. On the other hand, loans are of poor quality due to such a perplexing variety of reasons that simply talking of "bad loans" does little justice to the underlying issues.

Bank lending as micro-economic policy instrument

China's banking system was always meant to serve the state-owned economy. In 1978, 91.06% of all loans extended by financial institutions went to the state-owned sector of the economy, another 6.25% to communal or state agriculture, and 2.69% to urban collective-owned (quasi state-owned) enterprises. In 1996 the percentage for the SOEs was still 74.44%, for agriculture 7.16%, and for urban collective-owned enterprises 2.23%.¹⁵ Problems in SOEs thus immediately impact on the financial health of the banking system. And due to the focus on large-scale production in a centrally planned economy, the number of borrowers per individual bank branch is exceedingly small. If all these enterprises are in the same industry, the bank has no opportunity to diversify from industry-specific risks. For example, as of May 1995 Xunwu County in Jiangxi Province with a bad loan ratio of 53.11% had only nine state-owned industrial enterprises, of which three were operating on a regular schedule. One of these enterprises accounted for 56.77% of all local ICBC loans, and another one for 87.20% of all local CBC loans.¹⁶

The lending structure is still severely biased towards working capital loans (short-term loans of one year maturity or less).¹⁷ In the pre-reform period short-term loans of six months' maturity were appropriate for the purchase of materials and the payment of wages. But as the volume of working capital loans expanded and substituted for own fixed-quota working capital of SOEs, this short time span became too restrictive.

¹⁵ See China Financial Statistics (1952-1991), 10, and ZGJRNJ 1997, 470. In 1978 the financial system consisted of only the then commercial and central bank PBC and the RCCs.

¹⁶ See PBC Ganzhou (1995). Of all loans, 38.58% were doubtful and 2.05% lost. The banks' own capital had been depleted by 1994 through annual losses. Overdue loans in 1995 roughly equaled total deposits.

In 1978, 100% of all loans extended by state-owned banks were short-term loans and this share was still between 52.07% and 77.63% of all loans in 1996, while short-term loans in market economies tend to account for barely 10% of total loans.¹⁸ Medium- and long-term loans in China are by definition investment loans and thus require approval by the planning departments or the economic and trade departments and must be included individually in the credit plan. To extend investment loans thus requires going through a complex, partly bank-external approval procedure. These are strong incentives to extend primarily short-term loans and then to roll them over or to let them turn overdue.¹⁹

As the central government in the course of economic reforms abandoned much of its direct control over enterprises, the credit planning system became a major policy instrument and attempts were made to control lending by all financial institutions through lending limits and quotas for individual projects or enterprises. Embedded in the credit plan are different categories of policy loans: (i) lending of funds provided by the FM for particular purposes, usually for capital construction purposes; (ii) regular capital construction loans chosen by planning commissions and other government departments; (iii) loans for technological updating and transformation decided upon by the economic commission and the banks; (iv) various types of working capital policy loans such as for agricultural procurement, for foreign trade, or for key industrial enterprises.

¹⁷ PBC 6 Oct. 1997 for the first time allows banks to extend working capital loans for longer than one year. Approval for such loans should only be granted by a municipal or higher-level branch, and loans should primarily go to large and medium-sized SOEs.

¹⁸ For the data on China see China Financial Statistics (1952-1991), 10, and ZGJRNJ 1997, 470. The 52.07% share in 1996 comprises the short-term loans to industrial production enterprises, material supply enterprises, commercial enterprises, and construction enterprises. The 77.63% share comprises all loans except loans for investment in fixed assets. (The difference consist of loans to urban collective-owned enterprises, individual-owned industry and commerce, agriculture, foreign-funded enterprises and "others.")

¹⁹ See, for example, *Jinrong cankao* no. 3, 1998, 37.

This suggests that the category "overdue loans" overestimates the true value of "bad loans." On the other hand, it is also a common feature that interest due but not paid is capitalized as short-term loans which are then rolled over when interest payment does not arrive; in this case "overdue loans" may reflect loans of already very dubious quality.

The degree of government involvement varies, ranging from solely government decisions in the first category to little more than guidelines on what to lend for and lending targets in terms of volumina in the last category. But all policy loans have in common that the bank is not making independent lending decisions.²⁰ Various types of policy loans are extended on government orders in the knowledge that repayment is highly unlikely. Among these are the cotton procurement loans of the early 1980s, the “stability and unity” (*anding tuanjie*) loans of 1989-90, the loans for increasing inventories in SOEs in the early 1990s (loans remain on the books but no interest is charged), and the “turn losses into profit” (*niukui zengying*) loans in the most recent years (Hu and Wang, 1998). Beginning in 1994, the ICBC extends special loans to pay a basic living allowance to the employees of loss-making SOEs.²¹

Local government departments frequently try to influence those bank lending decisions that are not circumscribed through formal policy instructions. Since local state-owned enterprises belong to the local government, banks have incentives to before extending loans communicate with the enterprise’s superordinate government department; the loan application itself is usually submitted through this department. Local government pressure is especially relevant when lending is sought for economically not viable purposes, such as for social security financing or even enterprise tax payments.²²

If local bank branches choose to ignore the local government’s wishes they do so at their own peril. The local government is not only crucial in securing the repayment of old loans, but also in a number of respects of personal interest to bank employees,

²⁰ On the extent of policy loans in 1991 see Xiao (1997, p. 374). According to his calculations, formal policy loans accounted for 58.0% of CBC lending, 51.2% of ABC lending, 66.6% of BoC lending, and 17.9% of ICBC lending.

²¹ The ICBC headquarters issue maximum quotas on such loans to each province; if these quotas are not sufficient, the locality may exceed them but should (in urgent cases a posteriori) obtain approval from headquarters. These special loans are only extended if the local finance or labor department subsidizes the interest payment. I.e., the bank accepts that it will only receive interest and that repayment of the loan is undecided. (ICBC 13 June 1994)

²² See, for example, Xia (1996), or Hu and Wang (1998). County bank branches are apparently hard put to survive a “county head work meeting” (*xianzhang bangonghui*) or a “funds adjustment meeting” (*zijin xietiaohui*) unscathed.

including the availability of housing and education for employees' children. When governments can use indirect levers to influence bank lending, such as threats to stop repayment of old loans by an enterprise unless the bank extends new loans to this enterprise, the distinction between policy loans and independent bank lending decisions becomes blurred.

Economic transition affects the quality of the loan portfolio

Economic transition matters for the quality of bank loans in that rapid changes in the regulatory environment and in the economic structure are likely to have a negative effect on banks' balance sheets. One example is changes in the price structure brought about by price liberalization. As prices become market-determined and enterprises begin to compete, the profitability of individual enterprises may change drastically. Loans that may have made economic sense when they were first extended may no longer do so after another bout of price liberalization. As the structure of the real economy changes in response to price adjustments, banks are likely to be left with the low-quality loans of the old industries. By the end of 1996 92.5% of total retail sales prices (according to sales volume, below likewise), 79.0% of agricultural procurement prices, and 81.1% of material, intermediate product, and capital goods prices were market-determined,²³ suggesting that much of the price adjustments may have taken place already. But further price liberalization in a few materials and intermediate products could impact on many industries.

A second phenomenon has been the emergence of triangular debt chains. As individual enterprises are unable or unwilling to pay their suppliers, originally liquid enterprises become unable to repay their bank loans and stop paying their suppliers in turn. An exceptionally high volume of supplier credit outstanding in 1991 led to repeated government efforts including new loan injections to resolve the debt chain

²³ ZGWJNJ 1997, 479-81. "Market-determined" prices are prices which are not regulated on by the central, provincial, or municipal government or their departments.

and to prevent the economy from grinding to a standstill.²⁴ Triangular debt undermines the quality of bank loans in that it increases the volume of total enterprise debt to be repaid and furthermore leads to government pressure on banks to extend loans simply on the grounds that real activity would otherwise collapse.

Enterprise bankruptcies reveal yet another difficulty banks face in safeguarding the value of their assets during economic transition. According to Art. 37 of the trial bankruptcy law of 1986 (NPC 2 Dec. 1986), banks' claims are only satisfied once the costs of bankruptcy procedures have been covered, staff and workers have received outstanding wages and salaries, and taxes due have been paid. However, banks are frequently prevented by local governments from exercising their rights and courts may do their local government's bidding.²⁵ Enterprise liquidation in an economy with a highly incomplete market for bankrupt enterprises or bankrupt enterprises' assets furthermore is likely to lead to additional losses as assets may have to be sold below the value they would carry in complete markets. According to a nationwide survey of 145 of the 1520 enterprises which were declared bankrupt between 1993 and 1995, the average loan repayment rate among the 101 enterprises which by the survey date had completed the bankruptcy procedures was 9.2% (ZGJRNJ 1997, 285). In such an environment, banks may well prefer to keep non-performing loans on their books as long as possible and to hope for some repayment with the help of the local government or in exchange for new but well-targeted restricted-purpose loans.

²⁴ The SC organized special sessions to repay approximately one third of total investment in fixed assets loans caught in triangular debt chains. The efforts were facilitated by the large size and small number of such debts. Attempts to resolve short-term supplier credit chains remained on a much smaller scale. (ZGJRNJ 1992, 31, 52, 80, 457, 503f.)

²⁵ Wuhan Municipality went as far as issuing six veto conditions under which mortgaged or guaranteed loans, to which banks according to the law have an immediate and unlimited claim, need not necessarily be repaid to the bank. See FM 20 August 1996, Art. 6.1, and Chen (1997).

Skewed enterprise incentives

Enterprise managers have little incentives to repay bank loans. Most industrial SOEs have since 1988 entered some form of “contracting system” whereby the management enjoys certain rights in exchange for certain guarantees. These guarantees focus on tax payment but include norms on the use of retained profits, on loan repayment, and on the handling of earlier debts. (SC 27 Feb. 1988, Art. 16.7) But no side to the contract, neither the government or its department, nor the enterprise has an immediate interest in loan repayment. Factory directors do not receive a bonus for prompt loan repayment (but for large increases in tax payments), and are not penalized for not repaying loans. (SC 15 Sept. 1986, Art. 33 and 34)

With the incentive structure of the enterprise management skewed towards tax payment, investment, and enterprise-internal social welfare projects, there is a continuous reliance on banks to fund production. In particular, banks are asked to finance research and product development even though they may be the least capable of evaluating new endeavors. Banks thus often end up fulfilling the tasks that venture capitalists elsewhere perform, but cannot raise interest rates in accordance with the specific risk of a loan.

Enterprises which fear that they may not receive a loan again in the future, whether due to contractionary policies or for enterprise-specific reasons, have particularly little motivation to repay outstanding loans. The penalty interest rate is 0.04% per day which approximately doubles the interest burden, but this interest rate might still be lower than the price of funds procured through other channels.²⁶ Interest payment ends once a loan has been classified as overdue for one year (until 1998, two years), should the enterprise not choose to unilaterally end interest payments sooner.

Banks have begun to enforce loan repayment through the courts. In mid-1996 450,000 cases involving loan repayment were pending in the Chinese judicial system,

Bankruptcy is also used by enterprises as a means to evade liabilities. For example, according to a survey in Anshan Municipality (Liaoning Province), of 64 bankrupt enterprises 26 were bought by the conglomerate of which they were formerly part (Bi 1997).

accounting for 36% of all contract disputes. Banks frequently win their case, but are unable to collect their money or enforce a mortgage or guarantee. A recurrent feature is local protectionism, extending not only to the local government but also to the local judiciary; a court in locality A may try to prevent execution of a judgment reached by a court in locality B but extending to an enterprise in locality A.²⁷ Even if banks can enforce their claim, returns tend to be low.²⁸

Any overall estimate of bad loans in China thus compromises loans of vastly diverging quality, ranging from perfectly healthy loans that are overdue simply because banks have been prevented from extending appropriately medium-term working capital loans, to loans extended in the full knowledge that they will never be repaid, but turning "bad" only once they have reached maturity. Data on the extent of bad loans thus carry little useful information.

²⁶ On the interest rates see ZGJRNJ 1997, 494.

²⁷ See, for example, *Ming Pao* 20 Aug. 1996, or PBC Zhejiang (1998).

²⁸ For example, the ABC in Zhejiang Province (excluding Hangzhou and Ningbo Municipalities) between January 1996 and August 1997 sued 2800 times for repayment of loans worth altogether 950m yuan, but only received back 164m yuan (17%) and still had to pay legal fees of 17.09m yuan (PBC Zhejiang 1998).

Alternative Perspective

An alternative perspective takes into account that state-owned banks, SOEs and the government are all part of the "state sector." For example, enterprises could be forced by their superordinate government department to repay their loans even if that meant not to pay wages and salaries. The enterprise could then sell fixed assets to finance wage and salary payments (reducing the enterprise's net worth) or it could ask the government for budgetary support. That is, a "bad loan" could with equal justification be handled as an expenditure in the government budget or a reduction in enterprise equity.

Combining governments on all tiers, SOEs, and the state-owned financial system yields a consolidated balance sheet of the state sector. (See Table 2.) The upper half of the consolidated balance sheet lists the items that should be consolidated but cannot be consolidated because the individual balance sheets do not itemize in comparable fashion. For example, bank loans to SOEs in the state balance sheet should be consolidated with the item bank borrowing in the SOE balance sheet, but the SOE balance sheet only offers "current liabilities." The balance—which presumably consists of items such as inventories—is then taken into the second half of the balance sheet.

In the second half of the consolidated balance sheet international assets and liabilities approximately cancel out. The remaining state sector assets, primarily SOE fixed assets, are balanced solely by a very large debt to domestic households. Financial institutions have in the past lent very little to domestic households but attracted large amounts of savings that were passed on to the SOEs. If the concept of bad loans were a meaningful concept, then a financial hole somewhere in the state sector equivalent to 50% of bank loans (to SOEs) would imply that 74% of all household deposits constitute unrecoverable claims by households against the state sector. On the other hand, the residual state net worth is approximately equal to 39%

of all loans to SOEs. Bad loans thus could be written off by simply reducing state net worth. This state net worth constitutes equity in state-owned banks and SOEs that would have to be either written off or handed over to households in exchange for their deposits.

Table 2. Partly Consolidated Balance Sheet of State-Owned Banks, State-Owned Enterprises and Government, 1996 (b yuan)

Assets		Liabilities	
Items which should be consolidated but cannot due to items being differently aggregated in different balance sheets			
Bank loans to SOEs	5688.790	Bank deposits of SOEs	2384.65
Securities held by state-owned banks	410.420	“Other” liabilities of state-owned banks	-709.86
SOE current and other assets	6425.649	Bank financial bonds	247.710
		SOE currency holdings	162.840
		SOE total liabilities	7950.635
		Balance	2488.884
Balance	2488.884	International government debt	<966.699
SOE fixed assets	5003.425	SOE B-shares held by foreigners	35.301
Gold	1.200	Household deposits at banks minus loans from banks to individual-owned industrial and commercial enterprises (27.98)	3824.100
Net claims on international financial institutions	24.610	Household currency holdings	717.363
Foreign exchange	957.870	Domestic government debt	436.143
Real estate	?	SOE tradable A-shares	251.401
Roads and waterways	?		
Other government assets	?	State net worth	>2244.982
Total assets	8475.989		8475.989

The consolidated balance sheet was derived from the three individual balance sheets which in turn are based on data from ZGTJNJ and ZGJRNJ. For the individual balance sheets and an explanation of the assumptions made in their construction please contact the author.

The size of household claims on the state sector is equivalent to the value of all fixed assets of SOEs.²⁹ This has not always been the case. In 1978 total fixed assets amounted to 448.82b yuan while household deposits plus 81.5% of currency in

²⁹ A low depreciation rate implies that these assets are overvalued, while the fact that today’s valuation does not take into account inflation (assets are valued at their depreciated original value)

circulation were equal to only 42.26b yuan (21.06b yuan plus 21.20b yuan), that is one tenth of total fixed assets in SOEs.³⁰ To continue the argument, in 1978 the government had not yet begun to issue bonds, and enterprises had not yet issued shares; foreign exchange holdings were almost non-existent, as was government debt abroad. If in 1978, for which no detailed data is available, the balance from the top part of the consolidated balance sheet was approximately the same relative to SOE fixed assets as in 1996, then state net worth as a share of SOE fixed assets declined throughout the reform period. The relative reduction in state net worth implies that during the reform period the government has allowed household net worth to grow much faster than state net worth, but has retained its “voting rights” on the use and management of the assets.

The rapid rise of household claims against the state sector together with the existence of a financial hole in the state sector suggest that households may have been able to accumulate claims against the state sector because the state sector created money and reimbursed labor to an extent not justified by improvements in productivity. Table 3 illustrates this point by looking at three aggregates: industrial SOEs with independent accounting system, all industrial enterprises with independent accounting system, and the whole economy. Nominal wages and salaries per staff and worker in industrial SOEs with independent accounting system in 1997 were 9.51 times higher than in 1978. However, value-added per staff and worker in the same enterprises rose only 4.56-fold.³¹ The difference in growth rates was particularly marked in the 1980s (1990 vs. 1985, 1985 vs. 1978) and disappeared by the mid-1990s; in the period 1995 to 1997 wages and salaries per staff and worker grew

implies that these assets are undervalued. On average thus the value attributed to the fixed assets of SOEs may not be too far off their individual market value.

³⁰ See China Financial Statistics (1952-1991), 5 and 27; ZGTJNJ 1997, 39. The share of currency in circulation held by households is an estimate based on earlier data with extremely little time variation (Quanguo 1988, 28, 501, and Xie 1992).

³¹ This type of data for SOEs is only available given the stated limitations (nominal values, industry only, enterprises with independent accounting system only). Industrial SOEs with independent accounting system account for more than 95% of total Gross Output Value of Industry of SOEs throughout almost all years.

slightly slower than value-added. The wage rises in the first decade of the economic reforms far above productivity increases suggests that support for reform by the primarily urban employees of SOEs was purchased through extra large wage increases. These excessive wage increases only ended once the SC clearly stipulated in 1992 that the total wage bill may not rise by more than labor productivity (SC 23 July 1992, Art. 24).

The data for all industrial enterprises with independent accounting system³² still reveals excessive wage payments, albeit on a smaller scale, and a similar time pattern. But once the economy in total is considered, across all sectors and ownership forms, average annual per labor income rose only 13.02-fold between 1978 and 1997, whereas labor productivity rose 16.06-fold. In real terms, average annual per labor income also rose less than productivity (2.96 times vs. 3.42). Primarily in the state sector thus labor was reimbursed to an extent not justified by productivity increases.³³ This increased the share of the total wage bill in value-added (see bottom of Table 3) while gradually reducing profits.³⁴

Rapidly growing household savings is reflected in corresponding increases in bank lending. The enormous increase in bank lending to industrial SOEs for production purposes in comparison to the increases in value-added suggests that not all of this lending may have been justified by short-term production-based needs. As some enterprises turned unprofitable but were allowed to survive, their negative profit

³² SOEs accounted for 72.09% of employment in this category in 1978, and for 64.99% in 1997. (ZGTJNJ 1998, 134, 138)

³³ This does not imply that labor is reimbursed according to its marginal productivity. Given the extent of open unemployment in China as well as hidden unemployment in primarily SOEs, marginal labor productivity in many types of jobs is probably close to zero.

³⁴ The share of the total wage bill plus profits in the value-added of industrial SOEs with independent accounting system at approximately 0.3 implies a large share of depreciation and interest expenses, tax payments, and perhaps transfers to government departments as well as non-monetary remuneration of staff through, for example, welfare projects. A depreciation allowance in state-owned industrial enterprises calculated as annual change in the original value of fixed assets minus the annual change in the net value of fixed assets amounted to 17.01% of value-added in 1997 (ZGTJNJ 1998, 454 and 461). In 1995 interest expenses accounted for 15.23% of value-added (PRC Industrial Census 1995, 21). Sales taxes, surcharges, and value-added taxes in state-owned industrial enterprises with independent accounting system finally amounted to 26.97% of value-added in 1997 (ZGTJNJ 1998, 454f). This leaves approximately 10% of value-added unaccounted for.

rate did not lead to the sale of assets but to an increase in bank loans in order to finance wage and salary payments, and perhaps tax payments.

Despite the first stagnant and then falling profit rate, SOE investment in fixed assets (mainly capital construction and technological updating and transformation) also grew rapidly throughout the reform period at a rate exceeding the growth of value-added.³⁵ As the government reduced its budget appropriations, own funds as well as bank loans more than made up for the shortfall;³⁶ bank lending for investment in fixed assets (by all SOEs) increased rapidly throughout the reform period. But not all of the primarily administratively determined investment projects entered production. Abandoned investment projects again had little effect on the survival chances of these enterprises but reduced the quality of bank loans.

Overall thus, SOEs in financial difficulties rather than cutting back on wages or investment simply increased their bank loans. As a result, the state sector's net worth as share of fixed assets declined. With many state assets not valued in the balance sheet, the state sector's net worth may be sufficient to compensate its losses for a long time to come. Nevertheless, the Asian financial crisis has focused attention on the financial hole in form of bad loans. China's leadership appears determined to limit the size of the financial hole if not to reduce it by making the state-owned banks solvent again.

³⁵ Data on investment in fixed assets by industrial SOEs is only available for all SOEs, not for industrial SOEs with independent accounting system. Given the relative size of GOVI of the two categories (see note 31), the difference in investment should be negligible.

³⁶ Data on investment financing is only available for all state-owned units without further sectoral classification. Own funds may include funds raised outside the enterprise (but not obtained from the state, the banks, or foreigners).

Table 3. Efficiency Measures

Rate of increase across the time span (“x-fold growth”)	<i>1997/ 1978</i>	<i>1995/ 1978</i>	<i>1997/ 1995</i>	<i>1995/ 1990</i>	<i>1990/ 1985</i>	<i>1985/ 1978</i>
Wages and salaries per staff and worker in industrial SOEs with independent accounting system	9.51	8.25	1.15	2.34	1.94	1.81
Value-added per staff and worker in industrial SOEs with independent accounting system	4.56	3.78	1.20	2.26	1.24	1.35
Wages and salaries per staff and worker in industrial enterprises with indep. accounting system	10.12	8.71	1.16	2.46	1.90	1.86
Value-added per staff and worker in industrial enterprises with independent accounting system	8.61	6.31	1.36	3.07	1.41	1.46
Average annual income per labor	13.02	10.27	1.27	2.61	1.59	2.47
GDP per labor	16.06	12.82	1.25	2.98	1.92	2.25
Average annual (real) income per labor index	2.96	2.65	1.12	1.26	0.98	2.15
(Real) GDP per labor index	3.42	2.93	1.16	1.66	1.14	1.55
Household savings deposits	219.75	140.85	1.56	4.17	4.39	7.70
Loans to industrial SOEs / value-added of industrial SOEs with independent accounting system	8.02	4.90	1.64	1.13	2.56	1.70
Capital construction by industrial SOEs	15.08	11.85	1.27	3.40	2.13	1.63
Technological updating and transformation by industrial SOEs			1.08	3.40	1.84	
Loans for investment in fixed assets by SOEs	266.68	228.56	1.17	3.66	1.82	34.32
Share of bank loans in the financing of total investment in fixed assets by SOEs	13.62	13.87	0.98	0.99	1.02	13.66
Share of own funds in the financing of total investment in fixed assets by SOEs	1.65	2.00	0.83	1.18	1.13	1.49
Annual ratios	<i>1978</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>1997</i>
Total wage bill of staff and workers in industrial SOEs with independent accounting system / value-added in these enterprises	0.0609	0.0697	0.0815	0.1282	0.1328	0.1270
Pre-tax profit of staff and workers in industrial SOEs with independent accounting system / value-added in these enterprises	0.2263	0.2252	0.2319	0.1848	0.1552	0.1419
Total wage bill of staff and workers plus pre-tax profit in industrial SOEs with independent accounting system / value-added in these enterprises	0.2872	0.2949	0.3134	0.3130	0.2881	0.2689
Cap. con. plus techn. upd. and transf. by ind. SOEs / value-add. in ind. SOEs with ind. acc. sys.		0.0967	0.1386	0.1967	0.2936	0.3175
Share of bank loans in the financing of total investment by SOEs	0.0169	0.1167	0.2304	0.2360	0.2339	0.2298
Share of own funds in the financing of total investment by SOEs	0.3194	0.3648	0.4771	0.5409	0.6387	0.5273
Share of household savings deposits in GDP	0.0581	0.0884	0.1810	0.3839	0.5072	0.6189

All data has been calculated from ZGTJNJ, ZGJRNJ, GGKF, and ZGGDZCTZTJZL 1950-1985 and ZGGDZCTZTJNJ 1995. For detailed sources and explanations on the derivations please contact the author.

Solving the Bad Loan Problem

For several years the Chinese government has been quietly writing off loans. Thus the SC in 1995 specified target groups whose capital construction loans were to be taken over by the state; these loans were originally extended under the switch from budget appropriations to credit scheme between 1979 and 1988 with funds provided by the FM (SC 12 July 1995).³⁷ In 1997 the government set aside more than 30b yuan to write off bad debts of SOEs, presumably these capital construction loans.³⁸ In 1998 the government financed a 40b yuan bad debt write-off as well as a conversion of 57.7b yuan of outstanding enterprise debt into state equity, without specifying the types of loans covered.³⁹ While the state commercial banks had no claims against the government in 1993, such claims reached a maximum of 98.45b yuan at the end of September 1996 and still amounted to 61.87b yuan, equivalent to 1.10% of total state commercial bank lending to the non-financial and non-government sector, in mid-1998.⁴⁰ Since the government does not borrow from the state commercial banks, these claims are likely to reflect the ongoing swap of enterprise debt into government debt which is then gradually repaid.

A further step was taken on 28 February 1998 when the NPC Standing Committee decided to recapitalize the four state commercial banks in order for them to meet the 8% risk-weighted equity-assets ratio specified in the Commercial Bank Law of 1995. The four state commercial banks on 18 August 1998 used their deposits at the PBC, partly freed up by a drastic reduction in the required minimum reserve rate from 13% to 8% and the abolition of the 5-7% safety reserve on 21 March 1998, to purchase

³⁷ The target group includes two enterprises in each of the “improve-the-capital-structure” trial cities, enterprises participating in the SC’s experiment to establish a “modern enterprise system” as well as several enterprise conglomerates individually chosen by the SC. Within this target group preference is given to enterprises favored by China’s sectoral policy, to enterprises the registered capital of which falls short of the minimum specified in the PRC Company Law, and to enterprises in poverty-stricken areas, especially “old revolutionary bases” and minority areas.

³⁸ See *China News Digest* no. GL97-142 (17 Oct. 1997), an internet source. Total medium- and long-term loans (i.e., loans for investment in fixed assets) outstanding at year-end 1997 were 1547b yuan. (ZGTJNJ 1998, 668)

³⁹ See *The China Finance Association Update* vol. 5, no. 3 (7 Dec. 1998), an internet source.

270b yuan of special 30-year interest-paying state bonds. The FM then used its receipts of 270b yuan to recapitalize the banks.⁴¹ Actual recapitalization of an individual state commercial bank was need-based in that it depended on the risk-exposure of its assets, its present net equity, the extent of its doubtful loans and the difference between its present asset-equity ratio and the desired 8%.

A third measure is the immanent establishment of resolution trust companies to take over the bad loans of the state commercial banks. The head of the CBC in early 1999 announced the impending establishment of an external "asset management company" to take over 24.8% of the CBC's loans in exchange for bonds guaranteed by the FM.⁴² Depending on the success of this asset management company, the practice may be extended to the other state commercial banks. But even though this asset management company will only be dealing with the dubious loans of one state commercial bank—the CBC accounted for 14.88% of all loans extended by financial institutions at the end of 1997—the scope is still large, with the loans supposed to be shifted to the asset management company equivalent to 3.95% of GDP in 1997.⁴³ And the CBC remains a special case in that many of its loans were originally little more than government budgetary funds to be repaid by the borrower. Writing off half of the loans of the state-owned financial institutions would have cost 50.09% of GDP in 1997.⁴⁴ Total government budgetary revenues in 1997 were equal to only 11.57% of GDP.

The establishment of resolution trust companies raises two questions. How can the resolution trust companies identify the truly "bad" loans? And why should resolution trust companies be more qualified than the banks to handle whatever is viewed as "bad loans?" One answer is that the resolution trust companies enjoy such a high rank that they can reach overarching decisions on the future of individual enterprises as

⁴⁰ On the data see PBC Quarterly Statistical Bulletin 1998-3, 20.

⁴¹ See *Jinrong shibao* 19 August 1998.

⁴² See *Xinbao* 15 January 1999.

⁴³ On the share in total loans see ZGJRNJ 1998, 508 and 560. On the ratio to GDP see ZGTJNJ 1998, 55.

⁴⁴ For the data see ZGJRNJ 1998, 508, and ZGTJNJ 1998, 55 and 269.

well as their loans. In other words, the resolution trust companies would turn into agencies for enterprise liquidation and privatization. With close to 100,000 state-owned industrial enterprises alone, the scope of such an undertaking would be enormous. Banks, enterprises, the state asset administration bureau and other government institutions would have to provide detailed business information to these agencies. The size of the resolution trust companies would be daunting. It is unlikely that the Chinese leadership will subscribe to such a powerful institution. But if resolution trust companies are not endowed with rank and powers exceeding those of enterprises and banks, it is unclear why they should be established in the first place.

Re-capitalizing the state commercial banks, writing off bad loans directly or transferring them to a resolution trust company all have in common severe selection problems during their implementation. How are the "bad loans" to be written off or transferred chosen, when the concept of bad loans carries little information about the true quality of the loans and when bank managers may themselves be responsible for some of the accumulated bad loans? Furthermore, when "bad loans" are written off categorically and recapitalization takes place according to need, then large moral hazard problems may arise in the future. The establishment of resolution trust companies has therefore been repeatedly justified as a one-time measure to free the state commercial banks from past burdens. State commercial banks are expected to make a new start in commercial banking. But this ignores that exclusively market-based, economic lending decisions are not yet a reality in China. All banks are still directly or indirectly state-owned and not free of central and local government directions on lending if not immediate interference in individual loan decisions. Writing off past bad loans may improve the current balance sheets of the banks, but by itself cannot improve future lending practices.

The current bad loan problem has arisen from a fundamental discrepancy of interests. The traditional task of the state-owned banks is to support the state-owned and urban collective-owned enterprises of all tiers. But while these enterprises are owned by ministries (departments) on any one of four tiers or a combination thereof,

i.e., the central, provincial, municipal/ prefectural and county tier, the four state commercial banks are owned by the central government alone. Local governments thus have every incentive to exhaust the financial resources of the local bank branch in an attempt to support the locally owned enterprises with little consideration for the quality of the loan as long as the central government is responsible for the solvency of its banks.

If one accepts that China is unlikely to adopt large-scale privatization of its SOEs and that bank branches are unlikely to operate independently of the government on the corresponding tier in the near future, then one solution to the bad loan problem would be to unify ownership of enterprises and banks on one and the same tier; thus municipal branches of the state commercial banks could be turned into “legal persons” with the branch equity turned over to the municipal government.⁴⁵

Municipalities in conjunction with the provincial and central government could then own the provincial branches and the central headquarters. These would lend primarily to the few provincial and central SOEs, facilitate transfer payments within the bank nationwide, and participate in large loans on the municipal tier. In addition, in order to create competition, some state commercial banks could be floated on the national stock markets.

For example, the BoC due to its past focus on foreign trade and its relatively healthy accounts would be a prime candidate for a nationwide, publicly traded bank. The CBC with its focus on investment financing would be another candidate; lending decisions are small in number and already quite centralized. Given the potential extent of bad loans in the case of the Construction Bank of China, which emerged in 1985 out of the Finance Ministry and only slowly severed its links, large government guarantees might be necessary. Since many of these loans may have been determined by lower-level tier planning commissions as well as economic and trade commissions,

⁴⁵ The municipal tier is the tier of choice because individual counties differ too much; a municipal-tier based banking system can diversify risk across counties. The provincial tier is too removed from much of the actual lending. For example, in Jiangsu Province the provincial tier of all banks in 1995 extended only 20.29% of all loans extended by the subcentral tier branches (JSJRNJ 1996, 152).

the central government could accept some of these liabilities in exchange for localizing the Industrial and Commercial Bank of China and the Agricultural Bank of China. Both are lending primarily short-term with relatively large scope for local government interference; they also have the largest branch networks of all banks in China with the most dispersed approval authority for loans.

Municipal governments could then choose whether to support a local ICBC bank or a local ABC bank, or both (or a merger of both). With many local urban credit cooperatives originally set up by the state commercial banks, the local government may even want to incorporate these credit cooperatives (in some localities the urban commercial banks that have emerged by uniting several credit cooperatives) with the ICBC and/or ABC into one local bank. The provincial tier in such a restructuring would be left with the existing approximately one dozen regional banks in the economically advanced regions, and the various trust and investment companies.

In order to prevent any ownership decentralization from turning into a situation where local governments bankrupt their banks and then pressure the central government into helping maintain “social stability,” rigorous supervision and penalty mechanisms are necessary. At present the PBC is in charge of supervising all financial institutions (except the securities and insurance business). Its restructuring in late 1998 into nine regional branches is likely to strengthen its independence from provincial governments. Nevertheless, the PBC’s history does not inspire much confidence in its ability to exercise rigorous supervision. The PBC in many localities until today runs local urban credit cooperatives to support its staff welfare fund and to create jobs for relatives (Zhou and Liu, 1995); the PBC also maintains a number of other financial and non-financial institutions ranging from stock-trading companies to universities. The PBC was supposed to sever the links to its various commercial outlets in 1993 but as of early 1999 this process has not yet been fully completed.⁴⁶

⁴⁶ See PBC 4 Sept. 1993. The institutional reform announced by the Ninth NPC in March 1998 forces the PBC to half its staff; much of this staff may well end up in the subordinate financial institutions, compromising the PBC’s task as supervisor.

An additional, traditional Chinese control mechanism in form of the Chinese Communist Party has already been invoked through strict Party verticality in the banking system in an attempt to counter local government interference in bank matters. In November 1997 the Chinese Communist Party Central Committee (CCPCC) established a leading group for financial work headed by the prime minister. A CCPCC financial work committee as well as a CCPCC discipline work committee subordinate to the financial work committee and the CCPCC Discipline Commission followed;⁴⁷ parallel organizations are being established in all financial institutions. The crucial question is whether the Party supra-structure will ensure rigorous implementation of financial regulations and supervision of bank personnel, or rather in practice focus on enforcing Party center policies and requests of the top leadership. More policies is what the state commercial banks certainly do not need. Rigorous, unbiased financial supervision, on the other hand, is not exactly what the Party supra-structure has experience in. Local ownership of municipal banks as well as public ownership of joint-stock banks could create a proper counterweight to policy tendencies in the Party supra-structure.

⁴⁷ See *Jinrong shibao* 24 June 1998. The tasks of the financial work committee are: safeguarding the verticality of financial institutions (i.e., preventing local interference in bank matters), support for the PBC in regulating the financial system (i.e., making sure that financial regulations are no longer ignored), supervising financial decision-making on all tiers (i.e., preventing corruption by holding financial leaders on all tiers personally responsible) and coordinating in the case of conflicts between Party committees in bank branches and local government.

Conclusions

Although the PBC can easily bridge any liquidity crisis and the central government ultimately guarantees the solvency of the state banking system, policy makers in China in the aftermath of the Asian financial crisis have become concerned about the health of the banking system for good reason. First, while China's central bank may be able to meet any bank run no matter how large, the ensuing inflation could pose not only an economic but also a political challenge. Second, placing the financial hole in the banking sector limits the financial intermediation capacity in general. Alternative investment channels for households, whether legal or illegal, may have to be limited in order to prevent large-scale withdrawal of bank deposits. Illegal and semi-legal financial institutions, however, are growing and difficult to control. Third, an insolvent domestic banking system may, especially given the experience of other Asian countries, lead foreigners to reduce their investment in China. Foreign direct investment is the prime cause of China's large capital account surplus and a considerable factor in promoting economic growth, accounting for 11% of total investment in fixed assets in 1997 (ZGTJNJ 1998, 187).

But re-capitalizing the state commercial banks, writing off some loans and transferring other loans to resolution trust companies does not offer a comprehensive solution to what are primarily systemic problems. The concept of bad loans itself yields information of dubious quality. Bad loan figures are based on a traditional bad loan classification scheme that bears little correlation with the quality of loans. Banks face incentives to misrepresent the scale of thus measured bad loans. Enterprises frequently have incentives not to honor their debts even if they were financially able to pay interest and return the principal; banks have insufficient incentives and authority to prevent enterprises from doing so. Macroeconomic policies and developments finally directly impact on the quality of loan portfolios.

Even if the concept of bad loans provided useful information, bad loans so far reflect no more than the political decision to locate the state sector financial hole in

the state bank balance sheet. As long as governments on all tiers own and support SOEs, and as long as the central government ultimately guarantees the solvency of the banking system, the fundamental cause of the financial hole is unlikely to vanish. Any long-term solution to the recurrent bad loan (financial hole) problem may not be able to avoid a radical unification of interests on each tier. Locating most banking business on the municipal tier and giving the local government a stake in the well-being of these banks could induce local governments to allow their banks to operate independently. Nationwide stockholding banks would provide a competitive banking environment. The PBC in co-operation with the Party could gradually strengthen the supervisory mechanisms.

Writing off bad loans could be accompanied by less ostentatious measures that take into account the different reasons for which loans turn overdue (and then into doubtful loans or loan losses). Solutions could vary according to original lending responsibility and could include incentives for enterprises to repay loans, budget appropriations by governments on all tiers to banks or their enterprises, the liquidation of some enterprises and loan repayment through liquidation receipts, a high real interest rate and other measures that increase bank profitability and thus allow banks to finance write-offs themselves, and outgrowing the existing stock of bad loans by creating proper incentive structures for economic lending decisions in the future.

The concept of a quick and clean cut is typical of Western-sponsored reform agendas. But it also matches socialist China's traditional pattern of following the "Soviet model:" the preference for singular, large-scale solutions to problems that are more than uni-dimensional. Too often in the past, the measures introduced with big fanfare have petered out without having achieved their objective. A rapid transition in banking practices in China is simply unlikely. The alternative is to accept some basic Chinese realities and to allow diverse solutions with little more than a proper framework of incentives.

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Individual balance sheets

Table 4. Balance Sheet of State-Owned Banks 1996 (b yuan)

Assets		Liabilities and equity	
Total loans	6115.28	Total deposits	6857.12
(of which to urban collective-owned enterprises)	(263.88)	(of which by government)	(127.10)
(of which to private ind. and com. enterprises)	(27.98)	(of which by administrative units)	(94.77)
(of which to foreign-funded enterprises)	(134.63)	(of which by households)	(3852.09)
(of which "others")	(864.13)	Financial bonds	247.71
Claims on government	158.21	Currency in circulation	880.20
Securities	410.42	Liabilities to intl. fin. inst.	29.53
Gold	1.20	"Others"	-709.86
Claims on intl. fin. institutions	54.14		
Foreign exchange	957.87	Equity	392.42
Total	7697.12	Total	7697.12

Definitions: State-owned banks comprise the central bank, the three development banks, the four state commercial banks, all "other" commercial banks, urban commercial banks, urban credit cooperatives, rural credit cooperatives, post office savings bureaus, financial trust and investment companies, financial companies, and financial leasing companies.

Assumptions:

All bank loans that are not explicitly marked as having been extended to collective- and privately (or individual-) owned enterprises and foreign-funded enterprises are assumed to have been extended to state-owned enterprises. (This may not be fully true of the item "others," which may, for example, include small amounts of real estate lending to households.) Privately owned industrial and commercial enterprises do not hold deposits as enterprises but as households.

It is assumed that urban collective-owned enterprises and foreign-funded enterprises have deposits equal to their loans. When consolidating the balance sheets it is furthermore assumed that these enterprises hold no currency.

Bank deposits of SOEs equal total deposits minus deposits by households, government and administrative units, as well as minus an amount equivalent to the loans to foreign-funded and collective-owned enterprises.

Source: ZGJRNJ 1997, 464.

Table 5. Balance Sheet of State-Owned Enterprises With Independent Accounting System, 1996 (b yuan)

Assets							Liabilities and equity						
	Industry	Constr.	Com- merce	Sub-total	Other sectors	Total		Industry	Constr.	Com- merce	Sub-total	Other sectors	Total
Current assets	2067.094	404.543	1280.132	3751.769	1863.338	5615.107	Total liab.	3435.085	416.827	1460.348	5312.26	2638.375	7950.635
Fixed assets	2832.809	131.020	379.257	3343.086	1660.339	5003.425	Equity	1840.618	118.736	364.820	2324.174	1154.319	3478.493
Intangib., defer.			29.992	29.992	14.865	44.857	(A-shares)						(251.401)
Other assets	375.800		135.788	511.588	254.097	765.685	(B-shares)						(35.301)
Total assets	5275.703	535.563	1825.168	7636.434	3792.639	11429.073	Total	5271.703	535.563	1825.168	7636.434	3792.694	11429.128
Net fixed assets (FM statistics)	1981.36	91.64	265.27		1161.32								

Definitions:

Current assets or working capital (*liudong zichan*) comprise currency and deposits, short-term investment, payments to receive, and inventories.

Fixed assets (*guding zichan (heji)*) comprise fixed assets at original purchase value minus cumulative depreciation, the value of investment projects under construction, minus fixed assets which are revalued or are lost but have not yet been written off.

Net fixed assets (*guding zichan jingzhi*) in the FM statistics denote the year-end net value of fixed assets.

Equity (*suoyouzhe quanyi*) comprises paid-in capital and reserves.

Data construction (assumptions):

Underlined data has been derived through own calculations.

For state-owned industrial enterprises with independent accounting system (which produced 96.22% of total Gross Output Value of Industry by state-owned industrial enterprises) balance sheet data is available as given, except for the category “other assets” and total liabilities which are residuals. Fixed assets of state-owned industrial enterprises with independent accounting system as given in the industrial statistics differ from the net fixed assets given in the Finance Ministry statistics (both in ZGTJNJ 1997) for all state-owned industrial enterprises, presumably primarily because the former includes fixed assets still under construction (ZGTJNJ does not define the Finance Ministry statistics). In the following, the distinction between state-owned industrial enterprises with or without independent accounting system is ignored. For all other sectors of the economy no fixed assets data apart from the net fixed assets data from the Finance Ministry are available. It is therefore assumed that actual fixed assets in all sectors of the economy exceed FM net fixed assets by the same proportional amount as in the industrial sector (1.4297 times).

For construction enterprises fixed assets are thus derived and current assets then calculated as the residual given total assets.

For the sector “commerce, grain and foreign trade” (abbreviated “commerce”) only data on large and medium-sized enterprises in wholesale and retail sales trade are available, and only “capital” data (a sub-category of equity) for these enterprises are available according to ownership. (For all commercial enterprises, capital in 1996 was equivalent to 13.83% of total assets.) It is assumed that the share of state-owned enterprises in all other balance sheet items is equal to the share of state-owned enterprises in

the item capital (67.49%). It is further assumed that these large and medium-sized state-owned enterprises in wholesale and retail sales trade are fully representative for all state-owned enterprises in the sector “commerce,” and that the volume of fixed assets exceeds the net value of fixed assets provided by the Finance Ministry by the same proportion as in the industrial sector (1.4297 times). This means that the balance sheet items available for all large and medium-sized enterprises in wholesale and retail sales trade are first multiplied by 0.6749 (to derive the state-owned enterprises), and then multiplied by 1.4297 to adjust for the larger fixed assets than net fixed assets as well as by 1.1546 to adjust for the fact that the data so far only covers the large and medium-sized state-owned enterprises in wholesale and retail sales trade rather than in the whole sector.

For all other sectors, only the Finance Ministry net value of fixed assets data is available (agriculture 104.55b yuan, transportation, postal and telecommunications services 769.66b yuan, urban public utilities 88.82b yuan, and a rest of 198.29b yuan unaccounted for—to make up the total of 1161.32b yuan). It is assumed that fixed assets are again 1.4297 times this net value of fixed assets, and it is further assumed that the other balance sheet items are in the same proportion to these fixed assets as they are for the total of industry, construction and commerce.

Sources: ZGTJNJ 1998, 35; ZGTJNJ 1997, 415, 428-31, 439, 484, 485, 486, 488, 489, 575-7.

Table 6. Balance Sheet of Government, 1996 (b yuan)

Assets		Liabilities and equity	
Government deposits at state-owned banks	127.100	Domestic government debt	436.143
Deposits by administrative units at state-owned banks	94.770	International government debt	<966.699
Equity of		Bank loans	158.21
industrial SOEs	1840.618		
non-industrial SOEs	1637.875		
state-owned banks	392.420		
minus enterprise A-shares held by households and B-shares held by foreigners	-(251.401 + 35.301)		
Real estate	?		
Roads and waterways	?		
Other government assets	?	Net worth	>2245.029
Total assets	>3806.081		

Data construction (assumptions):

The government's international debt in 1996 was USD 116.275b; the RMB value was derived by applying an exchange rate of 8.3139. Although this foreign debt figure is listed in the government finance section of the statistical yearbook, more detailed data in the financial almanac for the years 1994-96 show that not all foreign loans are extended directly to the Chinese government (Finance Ministry). Approximately one half of all foreign debt is held by various trust and investment companies and banks. This suggests that the government's foreign debt listed in the balance sheet here as 966.699b yuan may only be half that amount. Furthermore, government borrowing from abroad may not simply be spent on consumption during the year or handed over to enterprises as capital (in both of which instances the balance sheet given here would be correct), but also lent on to enterprises with a duty to repay (in which case the government balance sheet should include an asset item "lending to SOEs").

All domestic government debt is held by households.

Included in the government's domestic debt are seven items collectively labeled "state debt:" Treasury bills (*guokuquan*), Finance Ministry Securities (*caizheng zhengquan*), State Construction Bonds (*guojia jianshe zhaiquan*), State Key Construction Bonds (*guojia zhongdian jianshe zhaiquan*), Special State Bonds (*tezhong guozhai*), Value-guaranteed Bonds (*baozhi gongzhai*) and Fixed-use Bonds (*dingxiang zhaiquan*). The following two items are not included in the balance sheet as it is unclear whether the government itself is liable: State Investment Bonds (*guojia touzi zhaiquan*) and State Investment Company Bonds (*guojia touzi gongsi zhaiquan*).

The approximately 30% of all A-shares held by legal persons (primarily state-owned units) reduce the government's direct ownership of state-owned enterprises further and thus also reduce the government's net worth. Exact figures are not available but should be about 250-300b yuan.

Sources: See other balance sheets; ZGJRNJ 1997, 472, 485; ZGJTNJ 1997, 257.

Table 7. Balance Sheet of Households, 1996 (b yuan)

Assets		Liabilities and equity	
Currency	717.363	Bank loans for	
Deposits	3852.080	productive use	27.98
Stocks	251.401	non-productive use	0(?)
Enterprise bonds	?		
Domestic government debt	436.143		
Productive assets	?		
Non-productive real estate	?		
Consumer goods	?	Net worth	>5229.007
Total assets	>5256.987		

Assumptions:

(i) Households hold 81.5% of total currency in circulation. According to survey results, in 1978 the ratio was 81.99 and in 1986 81.57% (Quanguo 1988, 28, 501). In 1991 the ratio was 81.51% (Xie 1992).

(ii) Households hold all tradable A-shares in Shanghai and Shenzhen (*nianmo liutong shizhi*), which account only for 26.61% of market capitalization in 1996. All other shares, which are not traded openly in the stock exchange, are held by government units, legal persons (stock companies, non-bank financial institutions, and SOEs that have at least one non-state owner), employees (less than 1% of market capitalization) and foreigners.

(iii) Households hold all domestic government debt.

(iv) Households hold no enterprise bonds (*qiyezhai*; total enterprise bonds outstanding at year-end 1996 amounted to 35.998b yuan) and no “policy financial bonds” (*zhengcexing jinrongzhai*; total such bonds outstanding at year-end 1996 amounted to 239.970b yuan).

Note: Bank statistics only show loans to individual-owned industrial and commercial enterprises; they do not show other types of loans to households (which are probably negligible).

Sources: ZGJRNJ 1997, 446, 466, 472, 478.

**Notes and Sources for
Table 3. Efficiency Measures**

Notes:

Industry according to the national accounts consists of (i) mining and quarrying, (ii) manufacturing, and (iii) electricity, gas and water production and supply. Employment in the three sectors according to the employment statistics equals the employment data in the industry statistics. All staff and workers in state-owned enterprises work in state-owned enterprises with independent accounting system. State-owned enterprises with independent accounting system only employ “staff and workers.” (See GGKF 146 and ZGTJNJ 1998, 138 for the years 1978 to 1995.) The same principle applies to all industrial enterprises with independent accounting system. (See the same source.) Wages and salaries include bonuses, subsidies, and allowances

Value-added per person in industrial enterprises with independent accounting system: Although the title is identical for the years 1978-1995 and the years 1995-1997, the data show what appears a very large, unexplained break in 1995/1996. The time series based on the ZGTJNJ in 1995 covers 510381 enterprises with a GOVI of 5494.686b yuan, the time series based on GGKF covers 66.10m employees (average number for 1995) with a GOVI of 5494.7b yuan. The ZGTJNJ statistics do not give the number of employees, but the total number of staff and workers in industry in the ZGTJNJ is equivalent to the number of employees in enterprises with independent accounting system in GGKF. Employment data and GOVI data thus suggest that the two sources cover the same enterprises. According to additional explanations in ZGTJNJ 1998, 486, pre-1990 values of value-added per person was made comparable to post-1990 values by standardizing them to 1990 prices—no pre-1990 labor productivity data are provided in this source. This suggests that post-1990 value-added per labor values are in 1990 prices, although the corresponding table on p. 459 does not say so. The same argument may hold for value-added per labor in industrial SOEs with independent accounting system; in this case no per labor value-added data is available and the data used for the calculations underlying the table has therefore been derived by dividing value-added with the number of staff and workers. (Other data in the tables which list value-added, such as GOVI, strangely enough are in current value, as can be seen for the case of GOVI from p. 433.) Assuming that the GGKF data is in current values, the ZGTJNJ data on value-added was converted into current values using the 1995 values for the two time series.

Average annual income per labor was derived as (average per capita urban income * urban population + average per capita rural income * rural population) / (total urban and rural employment). Both rural and urban income represents total income minus expenditures for productive purposes and minus taxes. The urban and rural income index apparently use deflated value data, without making this explicit.

Loans by all financial institutions to all state-owned industrial enterprises (the share of loans to state-owned industrial enterprises without independent accounting system may in practice be zero) according to ZGJRNJ 1997, 464, amounted to 912.35b yuan in 1995, but according to ZGTJNJ 1998, 622, to 1177.47b yuan. (The data for 1996 is 1127.83b yuan and 1421.33b yuan.) With total loans being approximately the same, the 22.52% (20.65%) difference is due to a different

categorization. In particular, the first source is limited to “industrial production enterprises” while the latter source comprises “industrial enterprises” and does not contain the separate item “loans to material supply enterprises” (possibly folded into loans to industrial enterprises); it also has “other loans” equivalent to only approximately 5% of total loans compared to 10% in the former source (approximately equal to loans to industrial production enterprises). The 1997 data in the table from ZGTJNJ 1998, 667, thus is not fully comparable to the earlier data, it comprises more items than the former time series. On the other hand, data on loans to industrial enterprises is not available for earlier years.

Data for the Gross Output Value of Industry (GOVI) follows new stipulations beginning in 1995. For some GOVI measures 1995 values according to the old and the new stipulations are available. For GOVI in enterprises with independent accounting system no 1995 value according to the new stipulations are available, but the time series up to and including 1995 and the 1996/97 values appear very consistent; perhaps the new stipulation primarily redefine the scope of industrial enterprises, not, however, the scope of industrial enterprises with independent accounting system. The 1995/96 change in the ratio of GOVI in enterprises with independent accounting system to GOVI in all enterprises (same for SOEs instead of enterprises independent of ownership) suggests that this is the case. The GOVI data for all industrial state-owned enterprises of 1997 was adjusted to be consistent with the earlier data in accordance with the 1995 relationship between GOVI calculated according to the old vs. new stipulations. (It was increased by approximately 14%.)

Investment in fixed assets in state-owned enterprises consists of capital construction, technological updating and transformation, and others. Data for state-owned enterprises with independent accounting system only is not available. Total investment in fixed assets by state-owned units in 1980 consisted to 74.93% of capital construction, to 18.42% of technological updating and transformation, and to 6.65% of other investment. In 1995 the corresponding shares were 67.93%, 30.27%, and 1.80% (ZGTJNJ 1998, 186, 191; ZGGDZCTZTJZL 1950-1985, 219). The investment data exhibits a statistical break in 1996 when data is revised by less than 1%. (The revision has been ignored.)

Sources:

Industrial staff and workers in industrial SOEs with independent accounting system, and their wages and salaries: Calculated from ZGTJNJ 1998, 138 and 164.

Value-added per staff and worker in industrial SOEs with independent accounting system: 1978-95: GGKF, 146; 1995-97: ZGTJNJ 1998, 454, ZGTJNJ 1996, 418. 1997 data according to ZGTJNJ 1998 was adjusted upward in the same proportion (more than two times) as ZGTJNJ 1996 data on 1995 exceeded GGKF data on 1995.

Industrial staff and workers in all industrial enterprises with independent accounting system, and their wages and salaries: Calculated from ZGTJNJ 1998, 134 and 160.

Value-added per staff and worker in industrial enterprises with independent accounting system: 1978-95: GGKF, 146; 1997: ZGTJNJ 1998, 459, ZGTJNJ 1996, 427. 1997 data according to ZGTJNJ 1998 was adjusted upward in the same proportion (almost two times) as ZGTJNJ 1996 data on 1995 exceeded GGKF data on 1995.

Income per labor (and index): Calculated from ZGTJNJ 1998, 105, 130f, and 324.

GDP per labor (and index): Calculated from ZGTJNJ 1998, 55, 58, and 130f.

Loans to industrial SOEs: 1978-90:China Financial Statistics (1952-91), 10f.; 1990-95: ZGJRNJ 1997, 464; 1997: ZGTJNJ 1998, 622.

Total wage bill of staff and workers in industrial SOEs with independent accounting system: Calculated from ZGTJNJ 1998, 138 and 164.

Pre-tax profit of staff and workers in industrial SOEs with independent accounting system: 1978-95: GGKF, 136; 1997: ZGTJNJ 1998, 455.

Labor income / GDP: Calculated from income per labor, employment data, and GDP per labor.

GOVI in SOEs with independent accounting system: 1978-95: GGKF, 146; ZGTJNJ 1998, 454.

GOVI in all SOEs: Calculated from 1978-95: ZGTJNJ 1997, 413; 1997: ZGTJNJ 1998 435.

GOVI in enterprises with independent accounting system: 1978-95: GGKF, 146; 1997: ZGTJNJ 1998, 441.

GOVI in all enterprises: Calculated from 1978-97: ZGTJNJ 1998, 433; 1995: ZGTJNJ 1997, 433.

Capital construction and technological updating and transformation: 1978-1985: ZGGDZCTZTJZL 1950-1985, 82 and 225; 1985-1997 calculated from: ZGJTJNJ 1998, 196 and 212.

Bank loans for investment in fixed assets by SOEs, and share of bank financing and own financing in the total financing of SOE investment calculated from: 1978-1995: ZGGDZCTZTJNJ 1995, 23; 1997: ZGTJNJ 1998, 188.

Household savings deposits: 1978-1995: ZGJRNJ 1997, 466; 1997: ZGJTJNJ 1998, 668.