

# AN ABC GUIDE TO PROVINCIAL LENDING PATTERNS IN CHINA: PROGRESS AND PROSPECTS

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## *Abstract*

The Agricultural bank of China (ABC) is the only one of China's large state-owned commercial banks that has not yet gone public. With a non-performing loan ratio of over 20% in 2007 and a concentration in China's poorer areas, ABC seemed an unlikely candidate for a successful initial public offering. Although it benefited from a major capital injection in November 2008, was it really in position to curb the lending to China's loss-making state-owned enterprises that had been the root cause of its formally very poor balance sheet? In this paper, we show that its proclivity to lend to such state-owned enterprises actually appears to have declined substantially over the 1998-2007 period. Although some evidence of redistributive lending practices remains, ABC's prospects may not actually be any worse than those of the other big state-owned banks that had initial public offerings in 2005-2006.

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# AN ABC GUIDE TO PROVINCIAL LENDING PATTERNS IN CHINA: PROGRESS AND PROSPECTS

## INTRODUCTION

In spite of growing competition from foreign banks and smaller banks within China, five large state-owned commercial banks (SOCBs) still account for more than half of the total assets in China's banking system. Four of these five banks, the Bank of China (BOC), the Bank of Communications (BOCOM), China Construction Bank (CCB) and the Industrial and Commercial Bank of China (ICBC) had initial public offerings (IPOs) in 2005-2006. The biggest of these was that of ICBC, which brought in a world record \$US 21.2 billion as it launched simultaneously in Hong Kong and Shanghai in October 2006. The Agricultural Bank of China (ABC) alone remained entirely in state hands and, unlike the other SOCBs, made little progress in reducing its non-performing loan (NPL) levels (see Table 1 and the discussion in Burdekin and Kochanowicz, 2008). Moreover, there seemed little evidence that ABC lending patterns were becoming any less redistributive over time even as lending by BOC, CCB and ICBC appeared to become more market-orientated (Burdekin and Tao, 2009). This past history offered little hope that ABC would soon be ready to be transferred into a joint-stock company like the other SOCBS. Nevertheless, ABC received a RMB 130 billion (\$US 19 billion) capital injection in November 2008 from Central Huijin, a subsidiary of China Investment Corp, the nation's sovereign wealth fund and was restructured into a state-controlled shareholding commercial bank in January 2009. Its reported NPL level fell from 23.5% at year end 2007 to just 4.3% at year end 2008, while profits increased over 17% and its capital adequacy ratio

reached 8.04% (*People's Daily Online*, April 27, 2009).<sup>1</sup> An IPO was expected to follow by the first quarter of 2010.

## LENDING PRACTICES SINCE THE 1998 ABOLITION OF THE CREDIT PLAN

Like BOC, CCB and ICBC, ABC first became accountable for its own profits and losses in 1994, when its old state-directed policy loans were transferred to the Agricultural Development Bank of China.<sup>2</sup> The SOCBs continued to be subject to the government's credit plan to finance its state-owned enterprises (SOEs), however, and formal funding requirements were not lifted until 1998. Even after 1998, the historical burden of prior bad loans plus ongoing protection of many SOEs continued to hamper full commercialization of the SOCBs. State-owned banks were still allocating 75% of their short-term loans to SOEs in 2003 (Chiu and Lewis, 2006, p. 208) and an ongoing concentration of bank lending in favor of provinces where SOEs are dominant is identified by Dobson and Kashyap (2006, pp. 125-126). Meanwhile, Barth and Caprio (2007, p. 26) point to SOEs and collective enterprises receiving nearly half of total corporate loans despite contributing little more than a quarter of GDP.

Under the pre-1998 credit plan, forced loans to the SOEs fueled soaring NPL growth. The practice of assigning loan quotas to every region under each year's credit plan further boosted the allocation of funds towards SOEs because regions with low growth potential also tended to be the most dependent on SOEs. Phillips and Kunrong (2005) show that provinces with greater SOE shares in industrial production, on average, experienced lower growth rates. Such slower growth provinces with higher SOE concentrations tend to be relatively rural and

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<sup>1</sup> Whereas the other SOCBs had already achieved capital adequacy ratios above 10%, ABC's capital adequacy ratio remained sunk at -18.88% in 2007 (*An Evaluation of Commercial Banks' Competitiveness*, 2008).

<sup>2</sup> For more details on the past banking reforms, and ongoing developments under World Trade Organization membership, see Burdekin and Kochanowicz (2008). On the legal setting and regulatory challenges, see the comprehensive treatment in Barth et al. (2007).

located in China's interior. The 1998 lifting of the credit plan, and the formal elimination of minimum loan quotas for each region, was intended to increase the independence of the loan portfolios of the SOCBs. The theoretical framework set out in Burdekin and Tao (2008) suggests that, to the extent that the SOCBs have been taking advantage of increased freedom to pursue profit maximization since 1998, this should be evidenced in reduced emphasis on lending to SOEs (as the counterpart to increased lending to the private sector) and less emphasis on the weaker economic regions. This paper uses provincial level data through 2007 to examine whether the support for such a change in lending patterns previously observed for BOC, CCB and ICBC through 2005 (Burdekin and Tao, 2009) is now being reflected in ABC lending behavior.

Table 2 shows how the overall loan distribution of ABC, BOC, CCB and ICBC across China's 31 provinces, municipalities, and administrative regions evolved after 1998 based on a grouping that divides these entities into top, middle and bottom tiers according to each year's annual per capita GDP of each region.<sup>3</sup> Although more marked changes in the loan allocation pattern is apparent for CCB and ICBC, ABC's lending allocation to the richer provinces increased somewhat from 47.2% in 1998 to 54.2% in 2007.<sup>4</sup> ABC's rural base is reflected in an allocation of more than 22% of total lending to the poorest provinces throughout the period, essentially holding steady from 23.1% in 1998 through 23.6% in 2007. By contrast, the share of lending to the poorer provinces fell below 20% for both CCB and ICBC, and below 15% for BOC, by 2004.

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<sup>3</sup> All data utilized in this paper are drawn from the *Almanac of China's Finance and Banking*, the *China Statistical Yearbook*, and the Agricultural Bank of China website.

<sup>4</sup> BOC, CCB and ICBC data do not extend as far because their provincial lending data stopped being reported in the *Almanac of China's Finance and Banking* after 2004 (and also could not be obtained from the individual bank websites).

Another way to look at the allocation of funds is to consider the average ratio of loans to nominal provincial GDP. By comparing the three tiers, we can see if proportionately more lending is going to the poorer or to the richer provinces. In this respect, ABC has maintained a greater issuance of loans relative to GDP for the poorest provinces (Tier 3) than for the richer provinces (Figure 1). This is quite different from the experiences of BOC, CCB and ICBC (Burdekin and Tao, 2009). A relatively heavy loan allocation towards the poorer, typically more rural, areas where ABC's branches are concentrated is perhaps inevitable given ABC's traditional focus. It is notable, however, that Figure 1 reveals little tendency for the size of the over-allocation to the poorest provinces to fall after the 1998 reforms. Although the absolute level of the ratio declines across all three income tiers, the gap between Tier 3 lending and lending to the higher income tiers actually rises in the early 2000s before narrowing only slightly between 2003 and 2007. This casts at least some doubt on ABC taking advantage of the greater freedom to exploit potentially more profitable lending opportunities in the richer areas of the country.<sup>5</sup>

Concern with the negative effects of cutting back lending in the poorer parts of China (cf, Cheng and Degryse, 2007) helps explain why ABC seemingly made little move to shift the focus of its lending activity outside these areas. ABC's historical "Three Agriculture" lending focus, encompassing "Agricultural Industrialization, Agricultural Area Urbanization, and Agricultural Loans for Farmers," essentially forced ABC to set up branches in every village to meet its government-mandated goals. This left ABC with many redundant offices and employees -- while its rural borrowers tended to treat the loans as a fiscal subsidy, with correspondingly little

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<sup>5</sup> Podpiera (2006) suggests that the other SOCBs could also have done more to take advantage of the opportunities available in the richer regions, with all of the SOCBs losing market share to other financial institutions in those provinces featuring more profitable SOEs. On the other hand, even as SOCB efficiency levels and prudential levels continued to lag behind China's joint stock banks (Fu and Heffernan, 2007; Shih, Zhang and Liu, 2008; Ariff and Can, 2008; Lin and Zhang, 2009), recent data suggest at least some progress in closing the gap (Jia, 2009) and achieving higher profitability (Lu, Fung and Jiang, 2007).

expectations of repayment. ABC's outstanding agriculture-related loans totaled RMB 933 billion at the end of 2008 (*People's Daily Online*, January 19, 2009) and such loans have been accounting for more than a third of its total loan balance. As part of ABC's plans for going public, the China Bank Regulatory Commission (CBRC) on May 21, 2009 announced new regulatory guidelines for peeling off the "Three Agriculture" operations, relying in part upon the aforementioned November 2008 capital injection (which left Central Huijin and the Ministry of Finance each with a 50% stake in ABC). A special "Three Agriculture" department is to be set up within ABC, with an independent accounting system and guidelines calling for total loans to be no more than 50% of total deposits within five years.<sup>6</sup>

#### DISAGGREGATED PROVINCIAL-LEVEL ANALYSIS OF ABC LENDING

Park and Sehart (2001) pointed to pre-1998 SOCB lending being redistributive and driven, at least in part, by ties to the government's loss-making SOEs that tended to play a more important role in the poorer regions of China. Subsequent empirical analysis in Burdekin and Tao (2008) suggests ongoing SOE-based lending by ABC while disaggregated province-by-province analysis suggested that ABC lending, if anything, become more redistributive over the 1994-2005 period. In the provincial level analysis below we use updated data through 2007 to examine whether ABC lending patterns changed in the immediate lead into the bank's reorganization as a joint-stock company. Figure 2 suggests that there is a generally positive relationship between ABC loan-to-deposit ratios and provincial SOE shares over our 1998-2007 sample. This relationship changes substantially over time, however, and the strong positive relationship evident at the beginning of the sample in 1998 appears to have been entirely

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<sup>6</sup> The ongoing importance of "Three Agriculture" loans was confirmed by ABC's March 27, 2009 announcement that it was planning to generate RMB 160 billion in new loans for agriculture-related projects in 2009, however -- with RMB 50 billion of this total being directed to farmers [<http://www.abchina.com>].

eliminated by 2007.<sup>7</sup> Essentially the same inferences follow if we compare SOE shares with the provincial loan/GDP ratio and overall loan growth rate (Figure 3 and Figure 4). This suggests that, at least at the provincial level, a real shift in behavior may have occurred and that, by 2007, ABC lending was no longer disproportionately weighted towards provinces with greater SOE concentrations.

A progressive decline in the correlation between SOE shares and the loan-to-deposit ratio is confirmed in Table 3, which shows the correlation declining every year from a peak of 0.564 in 1998 to a low of -0.042 in 2007. The correlations between SOE shares and the loan/GDP ratio and loan growth rate also decline substantially after 1998. The correlation with the loan/GDP ratio declines from 0.571 in 1998 to just 0.175 in 2007. Meanwhile, the correlation with the loan growth rate drops from 0.457 into negative territory -- but, in this case alone, the major shift appears to occur right after the 1998 reforms rather than being spread out over time. In all instances, however, a sizeable correlation with the SOE share in the neighborhood of 0.5 in 1998 is seen to be greatly reduced by 2007. And, in two cases out of three, there is actually a negative correlation at the end of the sample period.

Table 4 reports regression results where we regress the loan-to-deposit ratio and loan/GDP ratio on provincial SOE shares, provincial per capita GDP and total deposits. In order to take into account changes over time, a time trend was included in the regression alongside a constant. The regression covers 31 provinces over 1998-2007, yielding a total of 310 observations and is estimated as a panel with fixed effects.<sup>8</sup> The baseline results in the first

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<sup>7</sup> This analysis defines SOE shares as the industrial output of state-owned and state-held enterprises divided by industrial output of SOE and non-SOE producers above designated size. An analogous shift between the 1998 and 2007 relationships is seen if we instead divide SOE industrial output by provincial GDP (results available upon request).

<sup>8</sup> We were unable to capture movements in total loan growth using this panel regression framework -- producing no significant coefficients and an R-squared below 0.01 -- perhaps because of the greater noise associated with year-to-year fluctuations in this growth rate.

column for each dependent variable are followed by expanded specifications discussed further below. The coefficient on per capita GDP is positive and significant at the 95% confidence level or better in all the regressions with the loan-to-deposit ratio, suggesting a tendency to lend more to richer provinces, *ceteris paribus*. This variable is always insignificant with the loan/GDP ratio, however. There is a positive response to total deposits, while the negative and significant coefficient on the time trend is consistent with tightening lending rates, and likely higher lending standards, over time. There is some evidence of a positive effect of the SOE share in the case of loan/GDP ratio (at the 90% confidence level) but the SOE share is insignificant in the loan-to-deposit ratio regression.

The overall SOE share in a province could itself encompass a wide range of performance levels, ranging from loss-making firms with low levels of productivity and profitability to more successful firms. The specifications reported in the second column for each of the two dependent variables allow ABC lending to respond not just to the total share of SOE production in a given province but also to the quality of these enterprises, as reflected in three performance variables provided in the *Almanac of China's Finance and Banking*. The three measures are SOE labor productivity relative to overall labor productivity in the province, the relative share of total assets to industrial output, and finally SOE value added relative to total provincial value added.<sup>9</sup> There is a negative response to the value added measure for both the loan-to-deposit ratio and the loan/GDP ratio and the coefficient is in each case significant at the 99% confidence level. To the extent that higher value added shares imply more efficient and productive enterprises, this finding suggests that ABC has been lending proportionately more to the weaker

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<sup>9</sup> More precisely, these three performance measures are defined as: (i) Total assets/industrial output ratio for SOEs relative to the ratio for SOEs and non-SOEs combined; (ii) Overall labor productivity (in yuan per person per year) for SOEs relative to productivity among SOEs and non-SOEs combined; and (iii) Ratio of value added to gross industrial output for SOEs relative to the ratio for SOEs and non-SOEs combined.

SOEs. It is unclear whether this can necessarily be ascribed to a deliberate strategy on ABC's part, however, as weaker enterprises are more likely to need funds and so some of this effect may be demand-driven rather than supply-driven. Otherwise, the asset/output ratio and relative labor productivity are insignificant in each case. Finally, the time trend is negative and significant as before while there is no longer any significant positive reaction to the overall SOE share -- with the loan-to-deposit ratio now evincing a negative response that is marginally significant at the 90% confidence level.

The final specification for both the loan-to-deposit ratio and loan/GDP ratio (shown in the third column under each dependent variable in Table 4) adds interactive time trend terms that allow responses to the SOE share, per capital GDP, and total deposits to change over time. Each of these extra terms represents the original right-hand-side variable multiplied by the time trend, in accordance with a procedure suggested by Farley and Hinich (1970) as a generalized way of testing for shifting slope coefficients over time.<sup>10</sup> Significant time trend effects for the Chinese banks have previously been noted by Burdekin and Tao (2008) and by Jia (2009), who finds evidence of improving SOCB loan/asset and deposit/loan ratios over the course of his 1994-2004 sample period. The overall significance of these extra variables is confirmed by F-tests that show the set of time trend interactions to be significant at better than the 99% confidence level in each case.<sup>11</sup> Interestingly, the results reveal a negative and significant coefficient on the time trend interaction with the SOE share in each case, consistent with a declining response to the SOE share over time. The coefficient on the SOE share itself remains positive and significant for the loan/GDP ratio (now at the 95% level), implying an initially positive reaction that subsequently diminishes -- very much in line with the year-by-year pattern observed in Table 3.

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<sup>10</sup> Unlike standard dummy variable and Chow tests, this procedure provides for a change that occurs gradually over the sample period (see also Howe and Upton, 1992).

<sup>11</sup> The exact F-test statistics are 4.96 for the loan-to-deposit ratio and 18.86 for the loan/GDP ratio.

The response to total deposits is also seen to significantly decline over time in the case of the loan/GDP ratio.

As shown in Table 5, the value added ratio, like relative labor productivity, tends to be negatively correlated with the overall SOE share in the province. This is consistent with provinces with higher SOE concentrations having, on average, weaker SOEs. At the same time, both performance measures tend to be positively correlated with provincial per capita GDP, suggesting that both higher SOE concentrations and lower quality SOE performance levels are more prevalent in poorer provinces. Thus, greater ABC lending to provinces where the SOE value added ratio is lower suggests not only that weaker SOEs get proportionately more funds but also is consistent with an ongoing redistributive lending pattern insofar as there is a consistent positive correlation (ranging between 0.300 and 0.486 over the sample period) between the value added ratio and provincial per capita GDP. The response to the relative value-added ratio remains negative and significant for both the loan-to-deposit ratio and loan/GDP ratio even when the interactive time trend terms are added to the model.

## CONCLUSIONS

In general, our regression results suggest that ABC lending continued to show some responsiveness to SOE shares, and some ongoing redistributive element, over the 1998-2007 period as a whole. Moreover, such lending may well have been focused on a particular subgroup of SOEs with relatively low value added ratios. The overall degree of SOE-based lending appears to have unambiguously declined since 1998, however, based on the shrinking year-by-year correlations and the negative time trend interactions seen in the panel regression results. This offers at least some hope that ABC's balance sheet will not necessarily regress to the poor

condition it attained prior to the November 2008 government-led capital injection. The lending pressures on ABC nevertheless remain greater than those faced by the other big SOCBs given ABC's concentration in poorer areas that are both more dependent on SOEs and have weaker SOE performers that are likely to remain in dire need of ABC loans.

While more data will help reveal whether the apparent change in ABC lending behavior is here to stay, a complicating factor remains the extent to which political connections may play a role in driving any remaining SOE-based lending on the part of ABC -- and other SOCBs. Shih (2004) draws attention, for example, to the prior consistently lower loan-to-deposit ratios for the province of Liaoning relative to the neighboring province of Jilin during 1978-1998. Even though Liaoning had a high concentration of SOEs, the greater availability of funds to Jilin may be explained by its leaders' much closer ties to the central government elite. Ties to the ruling party almost certainly remained an important influence on bank lending after 1998 as well (cf, Dobson and Kashyap, 2006, pp. 126-127) but could not be incorporated in our formal analysis owing to the lack of any consistent series on this politically-charged factor.

## References

- Agricultural Bank of China website [<http://www.abchina.com>].
- Almanac of China's Finance and Banking*, Beijing, various issues.
- An Evaluation of Commercial Banks' Competitiveness*. Beijing: Social Sciences Academic Press, 2008 (in Chinese).
- Ariff, Mohamed and Luc Can. "Cost and Profit Efficiency of Chinese Banks: A Non-parametric Analysis." *China Economic Review* **19** (June 2008): 260-273.
- Barth, James R. and Gerard Caprio, Jr. "China's Changing Financial System: Can It Catch Up With, or Even Drive Growth." Networks Financial Institute at Indiana State University, Policy Brief 2007-PB-05, March 2007 [[http://www.networksfinancialinstitute.org/pdfs/profiles/2007-PB-05\\_Barth-Caprio.pdf](http://www.networksfinancialinstitute.org/pdfs/profiles/2007-PB-05_Barth-Caprio.pdf)].
- Barth, James R., Zhongfei Zhou, Douglas W. Arner, Berry F.C. Hsu and Wei Wang. *Financial Restructuring and Reform in Post-WTO China*. Alphen aan den Rijn, Netherlands: Kluwer Law International, 2007.
- Burdekin, Richard C. K. and Emily Kochanowicz. "WTO Challenges and China's Banking System Today," in Richard C. K. Burdekin, *China's Monetary Challenges: Past Experiences and Future Prospects* (New York: Cambridge University Press), 2008, pp. 136-161.
- Burdekin, Richard C. K. and Ran Tao. "China's State-Owned Banks' Lending Practices, 1994-2005: Empirical Tests and Policy Implications." *Open Economics Journal* **1** (2008): 14-24.
- Burdekin, Richard C. K. and Ran Tao. "The Evolution of Bank-Lending Patterns in China: A Post-1994 Province-by-Province Analysis." In, James R. Barth, John A. Tatom and Glen

- Yago (eds.), *China's Emerging Financial Markets: Challenges and Opportunities*, New York: Springer, 2009, in press.
- Cheng, Xiaoqiang and Hans Degryse. "The Impact of Banks and Non-Bank Financial Institutions on Local Economic Growth in China." Discussion Paper 22/2007, Institute for Economies in Transition, Bank of Finland, Helsinki, December 2007 [<http://www.bof.fi/bofit>].
- China Banking Regulatory Commission website [<http://cbrc.gov.cn>].
- China Statistical Yearbook*, Beijing, various issues.
- Chiu, Becky and Mervyn K. Lewis. *Reforming China's State-owned Enterprises and Banks* (Northampton, MA: Edward Elgar), 2006.
- Dobson, Wendy and Anil K. Kashyap. "The Contradictions in China's Gradualist Banking Reforms." *Brookings Papers on Economic Activity*, no. 2 (2006): 103-162.
- Farley, John U. and Melvin J. Hinich. "A Test for a Shifting Slope Coefficient in a Linear Model." *Journal of the American Statistical Association* **65** (September 1970): 1320-1329.
- Fu, Xiaoqing (Maggie) and Shelagh Heffernan. "Cost X-Efficiency in China's Banking Sector." *China Economic Review* **18** (2007): 35-53.
- García-Herrero, Alicia, Sergio Gavilá and Daniel Santabárbara. "China's Banking Reform: An Assessment of its Evolution and Possible Impact." *CESifo Economic Studies* **52** (June 2006): 304-363.
- Howe, Thomas S. and David E. Upton. "Detection of Beta Shifts." *Quarterly Journal of Business and Economics* **31** (Summer 1992): 20-37.

- Jia, Chunxin. "The Effects of Ownership on the Prudential Behavior of Banks—The Case of China." *Journal of Banking & Finance* **33** (January 2009): 77-87.
- Lin, Xiaochi and Yi Zhang. "Bank Ownership Reform and Bank Performance in China." *Journal of Banking & Finance* **33** (January 2009): 20-29.
- Lu, Yan, Hung-Gay Fung and Xianfeng Jiang. "Market Structure and Profitability of Chinese Commercial Banks." *The Chinese Economy* **40** (September-October 2007): 100-113.
- Park, Albert and Kaja Sehr. "Tests of Financial Intermediation and Banking Reform in China." *Journal of Comparative Economics* **29** (December 2001): 608-44.
- People's Daily Online*. "Net Profit of Agricultural Bank of China up 19% in 2008." January 19, 2009 [<http://english.people.com.cn/90001/90776/90884/6576283.html>].
- People's Daily Online*. "Agricultural Bank of China Posts 17.5% Rise in 2008 Net Profit." April 27, 2009 [<http://english.people.com.cn/90001/90778/90857/90859/6645685.html>].
- Philips, Kerk L. and Shen Kunrong. "What Effect Does the Size of the State-Owned Sector Have on Regional Growth in China?" *Journal of Asian Economics* **15** (January 2005): 1079-1102.
- Podpiera, Richard, "Progress in China's Banking Sector Reform: Has Bank Behavior Changed?" Working Paper 06/71, International Monetary Fund, Washington, DC, March 2006.
- Shih, Victor. "Factions Matter: Personal Networks and the Distribution of Bank Loans in China." *Journal of Contemporary China* **13** (February 2004): 3-19.
- Shih, Victor, Qi Zhang and Mingxing Liu. "Comparing the Performance of Chinese Banks: A Principal Component Approach." *China Economic Review* **18** (2007): 15-34.

**Table 1: Non-Performing Loan Ratios for China's Big Four State-Owned Banks, 2000-2007**

<b>NPL %</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>
ABC	23.5	23.4	26.3	26.8	30.7	36.7	41.4	--
BOC	3.1	4.0	4.6	5.1	15.9	22.4	27.5	26.5
CCB	2.8	3.3	3.8	3.7	9.1	15.4	19.4	19.9
ICBC	2.7	3.8	4.7	19.1	21.3	25.5	29.8	34.4
<b>SOCB aggregate</b>	<b>8.05</b>	<b>9.22</b>	<b>10.5</b>	<b>15.6</b>	<b>17.8</b>	<b>23.1</b>	<b>25.4</b>	<b>--</b>

Note: The aggregate total for 2007 also incorporates BOCOM, which was re-classified as a "large state-owned bank" in April 2007.

Sources: 2006-2007 data are from *An Evaluation of Commercial Banks' Competitiveness* (2008) and the China Banking Regulatory Commission website [<http://www.cbrc.gov.cn>]; 2001-2005 data are as listed in Barth and Caprio (2007, p. 43) and the China Banking Regulatory Commission website; and 2000 figures are *Bankscope* data given by García-Herrero, Gavilá and Santabárbara (2006, p. 350).

**Table 2: Loan Allocation of the Agricultural bank of China Compared to the Other Big Four State-Owned Banks**

<b>ABC</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>
<b>High Tier</b>	54.2%	53.4%	52.3%	52.4%	52.2%	52.8%	50.9%	50.2%	48.2%	47.2%
<b>Mid Tier</b>	22.2%	23.0%	24.1%	24.7%	24.0%	21.0%	25.1%	27.0%	29.1%	29.7%
<b>Low Tier</b>	23.6%	23.7%	23.6%	22.9%	23.8%	26.2%	24.0%	22.8%	22.7%	23.1%
<b>BOC</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>
<b>High Tier</b>	--	--	--	66.5%	64.3%	64.2%	64.8%	67.4%	62.8%	63.0%
<b>Mid Tier</b>	--	--	--	19.5%	21.2%	20.8%	18.8%	20.6%	23.3%	23.3%
<b>Low Tier</b>	--	--	--	14.0%	14.5%	15.0%	16.4%	12.1%	13.9%	13.7%
<b>CCB</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>
<b>High Tier</b>	--	--	57.9%	61.4%	57.8%	58.4%	59.6%	58.8%	56.5%	54.0%
<b>Mid Tier</b>	--	--	23.0%	21.0%	21.4%	21.8%	20.4%	22.5%	23.9%	26.3%
<b>Low Tier</b>	--	--	19.1%	17.5%	20.8%	19.8%	20.0%	18.7%	19.6%	19.8%
<b>ICBC</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>	<b>2001</b>	<b>2000</b>	<b>1999</b>	<b>1998</b>
<b>High Tier</b>	--	--	--	57.8%	58.1%	56.3%	57.9%	57.6%	54.9%	54.0%
<b>Mid Tier</b>	--	--	--	23.3%	22.6%	23.2%	22.5%	24.6%	26.0%	26.8%
<b>Low Tier</b>	--	--	--	18.9%	19.3%	20.5%	19.6%	17.8%	19.1%	19.1%

Notes: China's 31 provinces, municipalities, and administrative regions are divided into 3 tiers according to their relative rankings based on each year's provincial nominal per capita GDP. Foreign currency loans and deposits are included from 2000 with the \$US amounts converted into RMB using the 8.28 fixed exchange rate that applied through 2004. The annual average exchange rate value was applied for 2005, 2006 and 2007.

**Table 3: Correlation Coefficients between the SOE Share and Agricultural Bank of China Lending Rates**

<b>SOE Share vs.</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
Loan-to-Deposit Ratio	0.564	0.551	0.475	0.437	0.348	0.297	0.239	0.122	0.057	-0.042
Loan/GDP Ratio	0.571	0.539	0.464	0.422	0.408	0.454	0.416	0.357	0.249	0.175
Loan Growth Rate	0.457	-0.536	-0.196	-0.341	-0.024	-0.072	-0.329	-0.339	-0.437	-0.284

**Table 4: Panel Regression Results for Agricultural Bank of China Lending Rates by Province, 1998-2007**

Independent Variables	Dependent Variables					
	LD ratio	LD ratio	LD ratio	LGDP ratio	LGDP ratio	LGDP ratio
SOE Share	-0.137 (0.142)	-0.289* (0.170)	0.360 (0.237)	0.0658* (0.0355)	0.0424 (0.0424)	0.139** (0.0553)
Per capita GDP	13.98*** (2.451)	13.83*** (2.419)	19.88** (9.835)	0.902 (0.613)	0.967 (0.605)	-0.245 (2.298)
Total Deposits	9.377*** (2.495)	6.165** (2.793)	1.303 (9.457)	2.436*** (0.624)	2.200*** (0.699)	16.37*** (2.210)
SOE Asset/Output Ratio Relative to Total Provincial Ratio		-0.0616 (0.0979)	-0.0543 (0.0977)		-0.0114 (0.0245)	-0.0373 (0.0228)
SOE Labor Productivity Relative to Total Provincial Productivity		0.0515 (0.0351)	-0.00991 (0.0394)		-0.00214 (0.00879)	0.00605 (0.00920)
SOE Value Added Relative to Total Provincial Value Added		-0.502*** (0.128)	-0.323** (0.135)		-0.126*** (0.0321)	-0.118*** (0.0316)
Time Trend	-0.0931*** (0.00551)	-0.0959*** (0.00577)	-0.0374** (0.0165)	-0.0113*** (0.00138)	-0.0117*** (0.00144)	-0.00242 (0.00385)
Trend x SOE Share			-0.0700*** (0.0187)			-0.0118*** (0.00436)
Trend x Per capita GDP			-0.566 (0.666)			0.0861 (0.156)
Trend x Total Deposits			0.00856 (0.737)			-1.221*** (0.172)
Constant	1.180*** (0.0995)	1.848*** (0.193)	1.251*** (0.247)	0.169*** (0.0249)	0.334*** (0.0484)	0.223*** (0.0576)
Number of observations	310	310	310	310	310	310
R-squared	0.736	0.751	0.764	0.504	0.533	0.614

Note: \*\*\*, \*\*, and \* denote significance at the 99%, 95%, and 90% confidence levels, respectively.

**Table 5: Correlations Between the SOE Performance Measures and Overall Provincial SOE Shares and GDP Levels**

1. *Total Assets/Industrial Output Ratio for SOEs Relative to the Ratio for SOEs and Non-SOEs Combined*

<b>Performance Ratio vs.</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
SOE Share	0.265	0.330	0.370	0.287	0.224	0.115	-0.099	0.042	0.087	0.129
Per capita GDP	-0.007	-0.039	-0.166	-0.242	-0.020	0.226	0.258	0.108	0.179	0.220

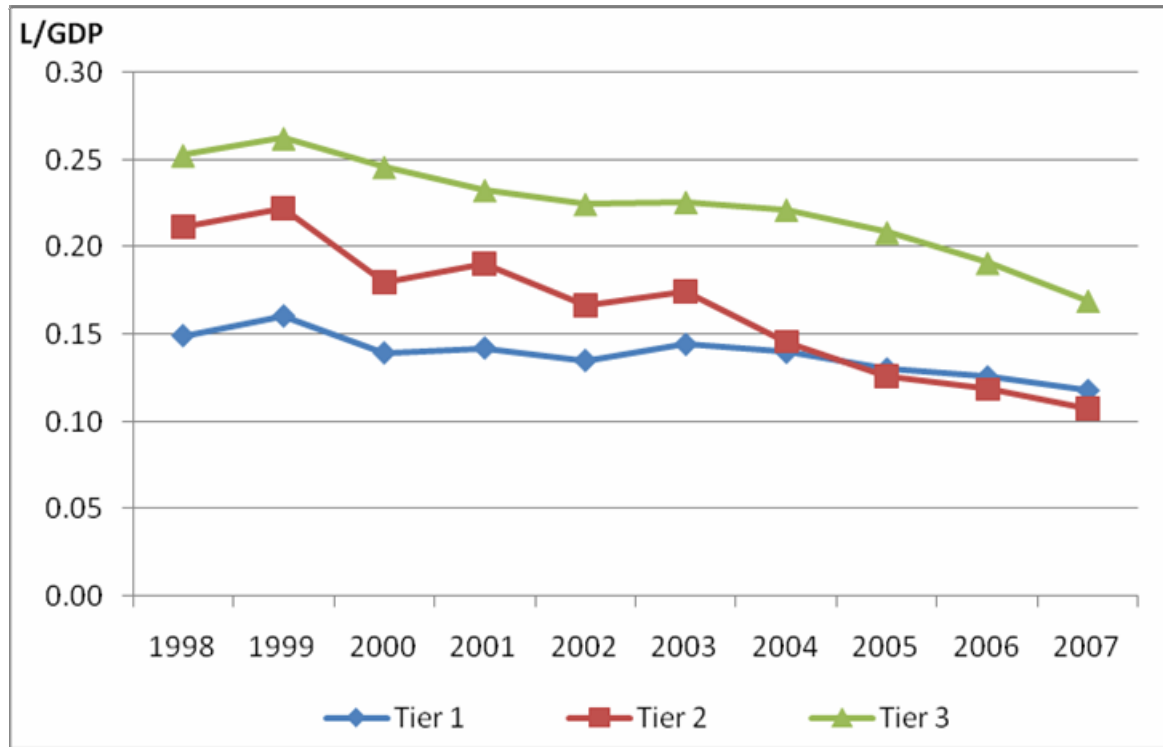
2. *Overall Labor Productivity (in Yuan per Person per Year) for SOEs Relative to Productivity for SOEs and Non-SOEs Combined*

<b>Performance Ratio vs.</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
SOE Share	0.115	-0.330	-0.488	-0.583	-0.621	-0.626	-0.624	-0.579	-0.508	-0.504
Per capita GDP	-0.068	0.293	0.303	0.286	0.309	0.371	0.398	0.424	0.381	0.438

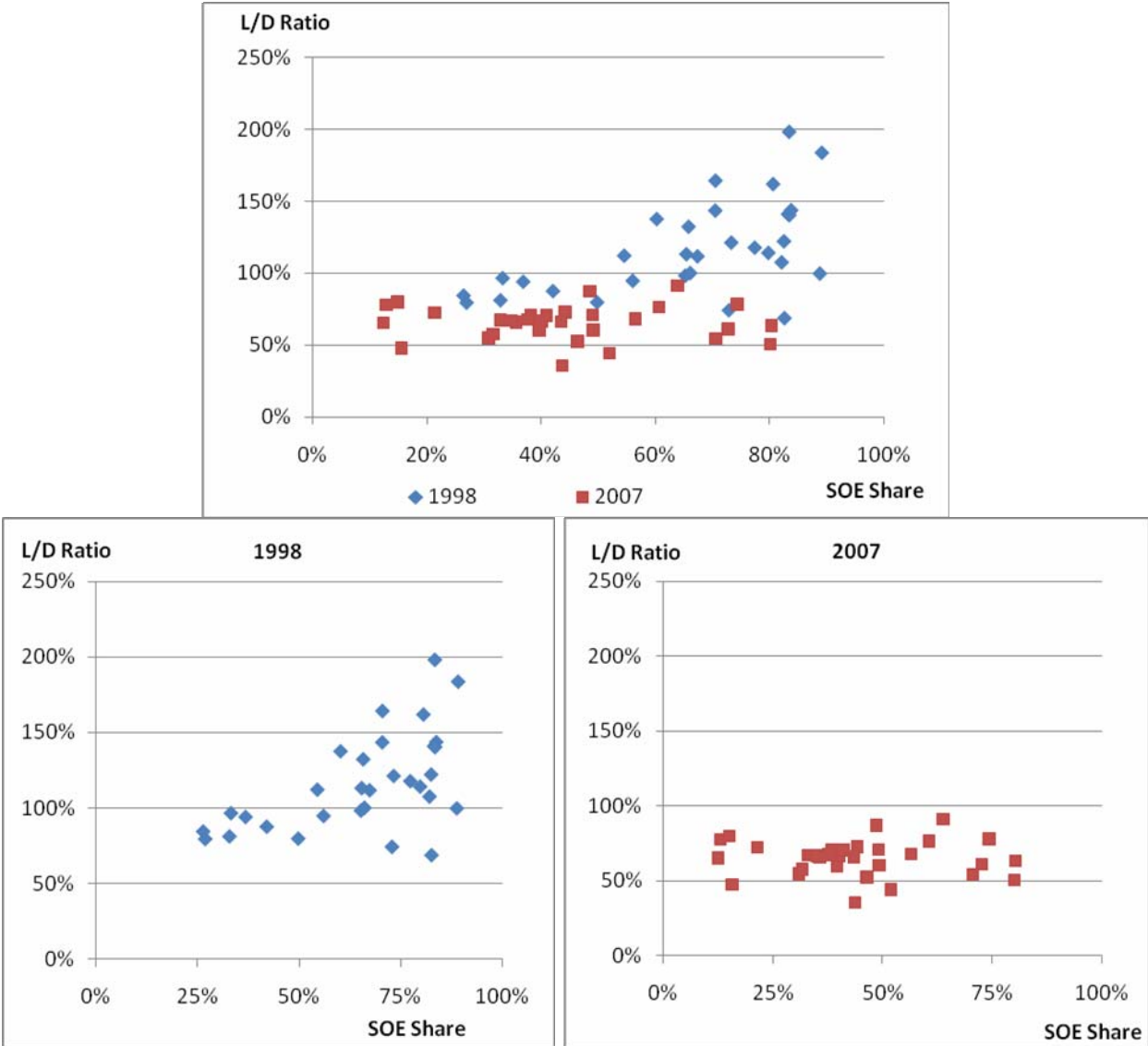
3. *Value Added/Gross Industrial Output Ratio for SOEs Relative to the Ratio for SOEs and Non-SOEs Combined*

<b>Performance Ratio vs.</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
SOE Share	-0.862	-0.805	-0.764	-0.803	-0.787	-0.779	-0.645	-0.250	-0.270	-0.344
Per capita GDP	0.486	0.450	0.459	0.323	0.328	0.411	0.456	0.392	0.300	0.405

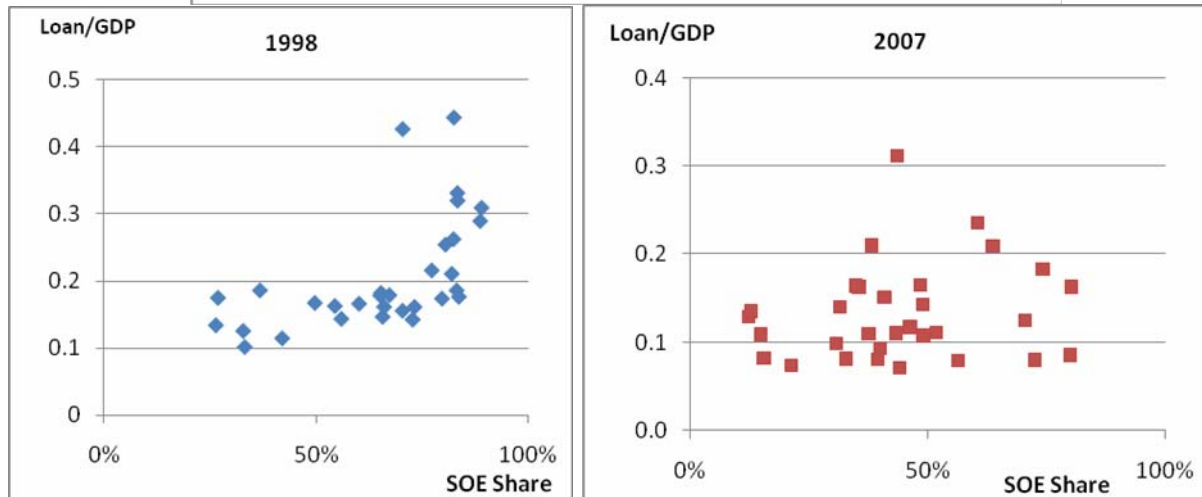
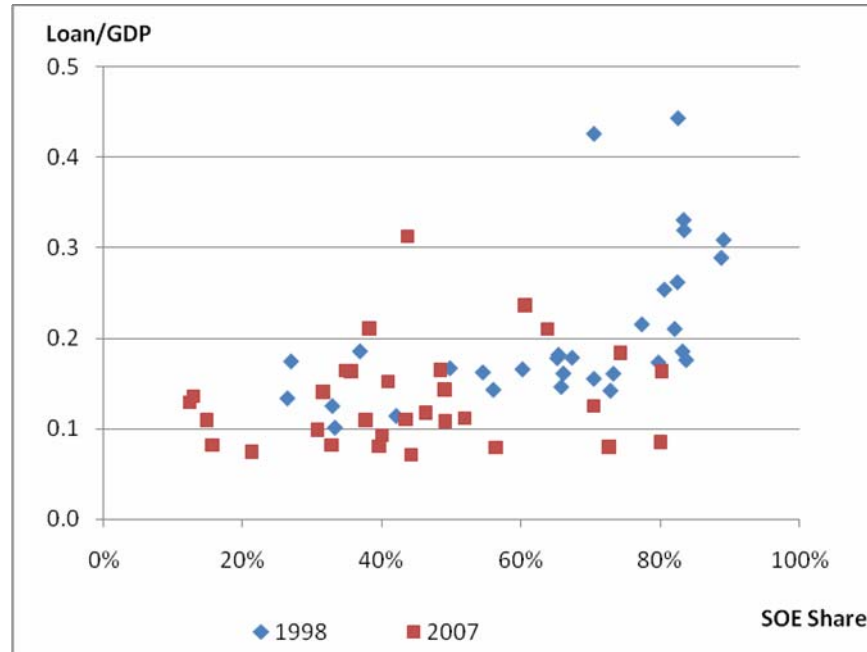
**Figure 1: Agricultural Bank of China's Average Ratio of Loans to Nominal Provincial GDP**



**Figure 2: Scatter Plots of Provincial Loan-to-Deposit Ratio and SOE Shares, 1998 and 2007**



**Figure 3: Scatter Plots of Provincial Loan/GDP Ratio and SOE Shares, 1998 and 2007**



**Figure 4: Scatter Plots of Provincial Loan Growth Rate and SOE Shares, 1998 and 2007**

