

HONG KONG INSTITUTE FOR MONETARY RESEARCH

**BANKING IN CHINA: ARE NEW TIGERS SUPPLANTING  
THE MAMMOTHS?**

*Giovanni Ferri*

---

*HKIMR Working Paper No.5/2008*

March 2008



*Hong Kong Institute for Monetary Research*

*(a company incorporated with limited liability)*

*All rights reserved.*

*Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.*

# Banking In China: Are New Tigers Supplanting the Mammoths?

**Giovanni Ferri\***

University of Bari, Italy

Hong Kong Institute for Monetary Research

March 2008

## Abstract

“New Tigers” (including city commercial banks) outperform state-owned commercial banks burdened with non-performing loans from unprofitable state-owned enterprises. We study whether this is due solely to superior corporate governance (multiple shareholders versus total government ownership) or also to the favorable environment (the New Tigers target affluent China, while state-owned commercial banks operate nationwide).

Using a field survey on 20 city commercial banks from three provinces at different levels of economic development, we find better performance at those in the East and worse performance at those controlled by state-owned enterprises. Geography and policy do matter, and reform of state-owned commercial banks is necessary to bring better banking to China.

Keywords: China, State Ownership of Banks, Corporate Governance, Geography and Performance

JEL Classification: G21, G30, G38

---

\* Department of Economics, University of Bari – Via C. Rosalba 53 – 70124 Bari (Italy).

e-mail address: [g.ferri@dse.uniba.it](mailto:g.ferri@dse.uniba.it)

I owe much to three anonymous referees who gave me valuable suggestions. Useful comments were provided also by Stefano Chiarlone, Li-Gang Liu, Donato Masciandaro, Laura Serlenga and other participants in various workshops (at Bocconi University, in Milan, at the 2005 Villa Mondragone International Economic Seminar, in Rome, at the Hong Kong Institute for Monetary Research and at the Bank of Korea) as well as in the JBF 30th Anniversary Conference, Beijing, 7 June, 2006. I am also grateful to the Asian Development Bank Institute (ADBI, Tokyo) for supporting my research project (a policy assessment of the main findings is contained in the ADBI working paper: Ferri, 2005) and to China's Research Institute of Finance at the Development Research Center of the State Council for conducting the survey diligently during 2004.

# 1. Introduction

Why are there banking problems in China, an economy that has been growing at an average rate of 9% over the last 25 years? Usually, we expect banking problems to emerge when a country's entire economy is gripped by a crisis, and so the Chinese case seems puzzling. In reality, the puzzle is only apparent, not real. To grasp this, we need to recall the special features of China's transition. This will help us understand how the combination of strong economic growth and a weak banking system are not contradictory, but the natural outcome of policy choices. In contrast, with most ex-centrally planned economies and well before the others followed their "shock therapy" to the market, China opted for a gradual transition strategy. As most economists now concur, this choice was far-sighted because it: (i) avoided the acute strains generated by the abrupt dismantlement of state enterprises (e.g. mass unemployment and destructive disruption of production); and (ii) allowed some institution-building before the privatization of key sectors of the economy, without which China risked moving from the problems of state ownership to those of private monopoly (Stiglitz, 2002; Black and Tarassova, 2003; Lau, Qian and Roland, 2000). The gradual transition allowed China to keep its robust growth while rooting the new domestic private economy (now accounting for more than 75% of GDP) in international production networks.

Nevertheless, there was a darker side of the story: State-owned enterprises (SOEs) outlived the planned economy, thanks to the gradual transition, and kept making large losses (Oppen, 2001). The four big state-owned commercial banks (SOCBs) absorbed the bulk of those losses. The unhealthy link between SOEs and SOCBs is among the chief worries concerning the future of China's economic miracle.

In this respect, we show that China's banking system is not monolithic: alongside the problematic "Old Mammoths" (as we dub the SOCBs), a breed of dynamic "New Tigers" (banks organized as companies limited by shares) is rapidly emerging. These banks show much better performance, possibly because the state was not their single shareholder as with the SOCBs. We conclude that even the New Tigers will not be able by themselves to solve China's banking problem. As we will show, part of their success seems due not so much to their better corporate governance, as to the fact that their business is concentrated in the Eastern belt, the most developed area of China. Thus, solving China's banking problem means dealing with the SOCBs. Although the Chinese authorities have taken steps to tackle the issue, the outlook is still rather murky.<sup>1</sup>

The rest of this paper is organized as follows. In Section 2 we review the negative impact of state ownership on the corporate governance of banks, with a specific focus on China. Then, we provide details on the rapid growth of the New Tigers, the new breed of banks, and ask whether they offer China an option to grow out of its banking problem. In this respect, we posit that an accurate answer requires distinguishing between the impact of better governance (contrary to the SOCBs, the New Tigers were not wholly state-owned) and that of the fact that, unlike the SOCBs, their business lies primarily in the most developed area of China. Section 3 sheds light on this issue. We report the results of a field survey that offers evidence on the extent to which the performance of the New Tigers differs depending on the

---

<sup>1</sup> Three of the four SOCBs (China Construction Bank, Bank of China and Industrial and Construction Bank of China) were successfully IPO-ed recently. Whether listing per se is enough for better governance remains to be seen.

level of economic development of the geographical area where banks do business. This is exactly the rationale for looking at city commercial banks (CCBs), a vibrant segment of the New Tigers, as these are banks operating widely across the country. By focusing on 20 CCBs located in three provinces of China at different levels of economic development, we hope to keep corporate governance (relatively) constant and thus be able to ascribe any significant difference in performance across provinces to their relative underlying prosperity. After describing the structure of the survey, we report our main econometric results. They confirm that CCB performance is systematically and positively related to the level of economic development in the provinces in which they are located. Furthermore, the richness of the information obtained allows us to gain additional insight into other factors affecting bank performance in China. Section 4 summarizes our main findings and briefly discusses policy implications.

## 2. Banking in China: the Old Mammoths vs. the New Tigers

### 2.1 The Negative Impact of State Ownership on the Corporate Governance of Banks

While China experienced its unique economic miracle, featuring average annual growth rates of about 9% over some 25 years, not all sectors progressed at the same pace, possibly providing bottlenecks for future growth. Progress was slowest in the service sector (Dutta, 2005). And, within the service sector, advancement was particularly sluggish in the financial sector. Much of the issue hinges on the link between SOCBs and SOEs, which has received much attention. In turn, this raises the important question of the negative impact of state ownership on the corporate governance of banks.

One of the key issues is the state control of banks. La Porta, et al. (2002) directly address the issue of government ownership of banks. The authors maintain this is a very special case to verify the “political” theories of the distortions induced by state intervention in financial markets. Their main finding is that, in a cross-country comparison, after state ownership of banks increases, the growth of financial markets, of per capita income and of productivity are all lowered. Thus, the general consensus in the literature is that state ownership of banks is detrimental to bank efficiency, to the development of financial markets and, through these channels, also to economic growth.

In the specific context of China, various authors have shed light on the negative impact of state ownership on bank performance. We cite just a few of them. Using city-level data over the early period of 1989-1991, Wei and Wang (1997) find evidence that China’s bank loans favored state-owned industrial enterprises and argued that such lending bias diminished the effectiveness of other measures designed to promote the growth of non-state sectors or to induce SOEs to restructure. In line with this, Brandt and Li (2003) find that, as a result of discrimination, private firms resort to more expensive trade credit. Using provincial data from 1991 to 1997, Park and Seht (2001) show that the financial reforms of the mid-1990s were ineffective at lowering policy lending by SOCBs, thus negatively impinging on these banks’ performance, while SOCB lending did not respond to economic fundamentals. Moreno (2002) points out that banks in China traditionally met government policy goals by financing the operations of SOEs, regardless of their profitability or risk, and that while bank exposure to SOEs tended to decline over time, SOEs still accounted for over one-half of outstanding bank credit in 2000, while exposure to poor-performing SOEs had a major impact on bank performance. Chang (2003) argues that China’s (mostly unprofitable) SOEs have been kept afloat with loans from SOCBs while, conscious that they could not force SOEs to pay back

their loans without causing their collapse and the inevitable political crisis that would ensue, SOCBs continued to lend to SOEs. This fact is confirmed by a survey performed by the People's Bank of China (PBOC) in 2003, finding that of the total non-performing loans (NPLs) of SOCBs, 30% was due to intervention by the central and local governments, 30% resulted from mandatory credit support to SOEs, 10% arose from the poor legal environment and weak law enforcement in some regions, and 10% stemmed from industrial restructuring in some enterprises, thus leaving only 20% that originated from the operational decisions of the SOCBs themselves (Zhou, 2004). Cull and Xu (2000) detect signs of SOCB loans going more and more to unproductive SOEs during the 1990s, when these banks increasingly assumed bailout responsibility (Cull and Xu, 2003).

These considerations suggest that the problems of the state-owned commercial banks largely stem from political interference leading SOCBs to suffer losses often associated with lending to SOEs. In the following, it will be interesting to check whether the new Chinese banks – on which we will dwell shortly – are less prone to this type of political interference. In this sense, considering that by the side of the problematic “Old Mammoths” (the SOCBs), a breed of dynamic “New Tigers” is growing quickly, it is important to focus on the latter.

## 2.2 The New Tigers Grow Intensely and Outperform the Old Mammoths

The New Tigers are growing very rapidly.<sup>2</sup> Even though truly private commercial banks have been largely absent from China, and in spite of belonging to different institutional categories, the New Tigers share a common trait distinguishing them from the SOCBs. Contrary to SOCBs, which have the state as the single shareholder, the New Tigers have a plurality of shareholders. Some of these shareholders may belong themselves to the public sector, being part either of the public administration or of the SOE system, but none of them is in the position of a single shareholder in any of the New Tigers. As argued elsewhere (e.g. Ferri, 2003; Liu, 2002), the plurality of shareholders may significantly reduce political interference in banks' business, thus delivering better corporate governance and performance.

This conjecture seems consistent with what is observed over the years. Namely, the New Tigers are denting more and more the SOCBs' market share, and also the former visibly outperform the latter by conventional indicators. Between 1998 and 2005, the annual rate of growth of total assets of the New Tigers constantly outpaced that of the SOCBs, with the only exception of the first year – when the Asian crisis caused also in China a shift by depositors to the largest banks, possibly perceived as Too Big To Fail – and in the latest year – when the SOCBs' rate of growth slightly overcame that of the New Tigers (Table 1). This gap produced a significant erosion for the SOCBs while the market share of the New

<sup>2</sup> Depending on the availability of data on Bankscope, we include in the group of the New Tigers 35 banks whose size differs greatly: Bank of Communications, China International Trust & Investment Corporation, China Merchants Bank, China Everbright Bank, China Minsheng Banking Corporation, Hua Xia Bank, Fujian Industrial Bank, Ping An Bank, Shenzhen RCCs, Bank International Ningbo, First Sino Bank, Qingdao International Bank, Business Development Bank, Chongqing Commercial Bank, Shandong International Trust & Investment Corporation, Guandong Development Bank, Shanghai Pudong Development Bank, Shenzhen Development Bank, Xiamen International Bank, Bank of Shanghai, Beijing CCB, Tianjin CCB, Shenzhen CB, Hangzhou CCB, Changsha CCB, Chengdu CCB, Jinan CCB, Nanchang CCB, Nanjing CCB, Ningbo CB, Wuhan UCB, Wuxi CCB, Xi'an CCB, Xiamen CCB, Zibo CCB. The last 16 of these 35 banks are City Commercial Banks (CCBs), the type of banks we will analyze later, while the first 19 are assorted across the other categories.

Tigers, conversely, almost doubled from 12.8 to 23.9%.<sup>3</sup> Even more importantly, the New Tigers made such significant gains of market share while achieving much higher returns than the Old Mammoths. Indeed, between 1998 and 2005 the ROA (Return on Assets) of SOCBs was always lower (usually much lower) than for the New Tigers: on average, the two groups of banks reached, respectively, 0.264 and 0.611% (Table 1 again). A similar indication may be derived looking at the New Tigers' ability to generate remuneration on their own capital: between 1998 and 2005, in spite of their low capitalization, SOCBs' ROE (Return on Equity) kept on average at 2.769%, while that of the New Tigers stood at 9.793%.

As for the CCBs – which are part of the New Tigers – they also experienced high growth, cumulating an increase in their market share from 1.9 to 3.3% and displaying good performance both in terms of ROA (0.706%) and in terms of ROE (6.925%).

### 2.3 Do the New Tigers Offer China a “Growing Out” Option?

In light of the above, however, do the New Tigers offer China a “growing out” option to overcome the difficulties in restructuring its SOCBs<sup>4</sup> and, through this, bring better banking to China?

Certainly, one might envisage a positive answer if the New Tigers were to continue the rapid growth of the latest decade (Ferri, 2005). However, there is no guarantee that this is based on solid economic reasoning. To be sure, the continuation of that growth postulates that the New Tigers really enjoy a competitive edge across the board vis-à-vis SOCBs. But is this really the case? One way to address this issue is assessing whether the better performance of the New Tigers is fully grounded in better governance. It is exactly at this juncture that we notice a second trait distinguishing the New Tigers from the Old Mammoths. The New Tigers concentrate their business in the most developed part of China, its vibrant Eastern Belt, while on the contrary, the SOCBs operate throughout the whole of the country.

As a result, it is not clear whether the New Tigers' better performance owes entirely to better governance or whether geography also gives these banks a great help. For instance, according to Huang (2002), SOCBs generate 95% of their profits from about half a dozen of the coastal cities, including Shenzhen, Guangzhou, Xiamen, Shanghai, Tianjin, and Beijing. If this is true, then doubts are cast on the possibility that the growth of the New Tigers can provide an effective solution to the banking problem outside the affluent Eastern Belt. As a consequence, to gauge how much of a solution the New Tigers may offer, we need to consider in more depth how far geography (i.e. favorable bank location) lies behind their strong performance. This is the main task for the rest of the paper.

---

<sup>3</sup> We measure market shares here on the sum of the SOCBs plus the New Tigers, thus focusing on commercial banks and excluding the postal system and policy banks.

<sup>4</sup> By the same token, it has been observed that, in the experience of transition economies, more progress is achieved through the entry of new banks rather than through rehabilitating old SOCBs (Claessens, 1998).

### 3. How Important is Geography for the Success of the New Tigers?

#### 3.1 The Rationale behind Looking at City Commercial Banks (CCBs)

To shed light on whether the New Tigers' outperformance depends on governance only or whether and to what extent the New Tigers are better simply because they do business in the most developed area of China, we draw on the results of a field survey to check how far, within (a significant segment of) the New Tigers, bank performance differs depending on the economic development of the geographical area where banks do their business. This is exactly the rationale behind looking at CCBs, one of the most dynamic components of the New Tigers, which includes banks located throughout the country. To be sure, Bankscope under-samples CCBs, including only 16 out of the universe of 112. On the universe, their total market share is about 5%.

CCBs came about after 1995 when the People's Bank of China put in order NPL-endangered urban credit cooperatives. Specifically, 2,194 urban credit cooperatives, rural credit cooperatives (located in towns) and local financial service institutions were salvaged with the injection of public funds, but at the same time, they were ordered to merge consolidating into the newly formed CCBs, established as joint-stock companies. CCBs inherited from urban credit cooperatives all NPLs formed during the "nonstandard operating period" of 1985-1995 (Girardin and Ping, 1997). At the end of 2003, 39 out of 112 CCBs had an NPL ratio above 20%, some of them even above 70%. CCBs' shareholders include urban enterprises, citizens and local governments (individuals are not allowed to become new shareholders). At present, CCBs are distributed in 112 central cities (district-level or above) of China – one city, one CCB without exception. Though they almost cover the whole of the country, their distribution is uneven. Generally speaking, there are more CCBs in Eastern provinces (e.g. there are 11 CCBs in Jiangsu Province) than in Western provinces (in Gansu, Qinghai, Xinjiang and Ningxia, CCBs exist only in the capital cities). Since their foundations, the financial authority required that all CCBs offer financial services only within the cities' own administrative districts.

By end June 2004, the 112 city commercial banks had 5,154 branches, 107,000 employees, and a five-grade NPL ratio of 14.1%. Among the various categories of financial institutions, CCBs rank second in terms of business development, close to joint equity commercial banks. CCBs focus on three main business lines: providing indirect financial services to Small and Medium-sized Enterprises (SMEs); offering financial services for city residents; and financing local government public works.

#### 3.2 The Field Survey on 20 CCBs from Three Provinces

By focusing on 20 CCBs located in three provinces of China featuring diverse levels of economic development, we keep corporate governance (relatively) constant and can thus ascribe any significant difference in performance across the provinces to their relative underlying prosperity.



We selected the three provinces to include: one with a level of prosperity just about the national average, this is Hubei province; one ranked amongst the most developed, this is Zhejiang province (with a GDP per capita about double the national average) average; one less affluent, this is Sichuan province (with a GDP per capita about two-thirds of the national average; Table 2).<sup>5</sup>

As shown in Table 2, not only GDP per capita, but also growth is fastest in Zhejiang, while Sichuan, though less developed, is enjoying faster growth than Hubei. Thus, while Zhejiang stands out in both the level and the dynamics of GDP, Hubei ranks before Sichuan if we look at GDP per capita, but the order is reversed in terms of growth. The 20 interviewed CCBs are distributed as follows: seven in Zhejiang, five in Hubei, and eight in Sichuan. The survey collected information on CCB asset-liability/profit-loss accounts over 2000-2003 as well as on their business features and several ownership and corporate governance aspects.

Overall, the 20 interviewed CCBs have 13,400 employees over 1,160 branches, with 12 employees per branch on average. The largest (smallest) CCB is that of HangZhou in Zhejiang province (that of Zigong in Sichuan province) with almost 1,400 employees (with just 63 employees). CCBs' business is largely concentrated in the city of establishment, hosting 92.3% of the CCB branches and receiving 98.2% of the loans. The bulk of the surveyed CCBs were established in 1997: 10 of the 20 (four in Zhejiang; three in Hubei; three in Sichuan). Two were established in 1996 (one in Zhejiang; one in Sichuan); three in 1998 (one in each province); one in 1999 (in Hubei); one in 2000 (in Sichuan); two in 2001 (in Sichuan); one in 2002 (in Zhejiang).

### 3.3 Different Patterns of Performance in More vs. Less Developed Provinces

Over the four years 2000-03, total assets of the CCBs expanded by 1.58 times in Hubei, by 2.15 times in Sichuan, and by 2.75 times in Zhejiang. Such ranking of the expansion of the banking business across the three provinces seems consistent with GDP growth.

Both size and performance of CCBs improve on average when we move from the less affluent Sichuan and Hubei to the most prosperous Zhejiang (Table 3). The median size (the number of employees per branch) of Zhejiang CCBs is three times (twice) as large as that in the other two provinces. With respect to Zhejiang, asset growth is just about  $\frac{1}{2}$  in Sichuan, and even lower in Hubei. Assets per employee, one of the basic indicators of productive efficiency, is almost twice as large in Zhejiang as in Hubei and Sichuan, while the Cost-Income ratio (operating costs/operating income) and the extent of capitalization

---

<sup>5</sup> The survey was conducted during 2004 by the Research Institute of Finance at the Development Research Center of the State Council on behalf of the Asian Development Bank Institute, Tokyo. These three provinces were selected not only to cover different GDP per capita and GDP growth but also in order to capture one province from the Eastern belt (Zhejiang) and two from the less developed interior (Hubei from the Central zone and Sichuan from the Center-West). Geography entails also a varying role of SOEs in the local economy. For instance, OECD (2005) reports that the share of value added by state controlled enterprises is lowest in Eastern China (30.0%), intermediate in Central China (55.0%), still higher in Western China (64.7%) and highest in North-Eastern China (70.3%).

are better for Sichuan CCBs. The differences in terms of average ROA, ROE, and the NPL ratio are all dramatic and favorable to Zhejiang CCBs. Finally, the CCBs undertaking M&A activities were two in Zhejiang, two in Sichuan, and none in Hubei.<sup>6</sup>

Before moving on to comment on the additional information we gather from the survey, it is useful to check whether the differences in performance across the three provinces are statistically significant. We test this running some basic econometric specifications where the dependent variable is, in turn, one of the classic performance measures: ROA, ROE, and the NPL ratio. In light of the few surveyed CCBs, to have enough observations we use the time dimension, covering the four years 2000-2003. Due to the fact that four of the CCBs were established after 1999 and to some missing information, we have 70 observations for ROA and ROE and 71 for the NPL ratio. In view of the still limited number of observations, we only consider as regressors bank size (controlling for possible economies of scale) and GDP per capita.

The results of these regressions are reported in Table 4. While larger bank size generally associates with better performance – but the nexus is not significant for the NPL ratio – CCBs operating in areas with higher per capita GDP always achieve better results (Table 4; Specification 1). Furthermore, the hypothesis that performance varies between the most developed province (Zhejiang) and the other two provinces cannot be rejected. Specifically, both ROA and ROE (the NPL ratio) are (is) significantly higher (lower) for CCBs located in Zhejiang, the most affluent province. In addition, the inclusion of a dummy variable taking value 1 only for CCBs located in Zhejiang (Specification 2 in each of the Panels in Table 4) turns out to be significant while, at the same time, the per capita GDP variables loses its significance. This result suggests that geography may matter also because of factors not entirely captured by the income disparities.

### 3.4 Further Survey Evidence on the Impact of Governance on Performance

As the former urban credit cooperatives were funded mainly by local fiscal revenue, the local government is a shareholder of the local CCB without exception. However, after reorganization and joint-stock transformation, CCBs have other shareholders as well. On average, for the 20 surveyed CCBs direct share-holding by the local government is 24.2%, but Chinese institutional investors play an even bigger role (34.0%), followed by SOEs (17.7%), private enterprises (13.9%) and households (8.6%; Table 5). While Chinese institutional investors appoint a share of CCB board directors similar to their shareholding (33.4%), private enterprises and households appoint fewer directors compared to their shareholding (respectively, 7.9 and 4.0%). On the contrary, local governments and, even more so, SOEs are more influential in terms of the directors they appoint vis-à-vis their shareholding (respectively, 28.7 and 26.1%).<sup>7</sup>

<sup>6</sup> A referee raised the issue of endogeneity, i.e. that Zhejiang was more developed because it has better CCBs and not CCBs perform better in Zhejiang because this province is more developed. I believe this reverse causality cannot be ruled out entirely. However, it should not be the driving force considering that CCBs were established only recently (Table 3) and they cover a limited share of the market.

<sup>7</sup> Generally, board directors are appointed and not elected. This may help explain why some categories of investors are less represented in CCBs' boards. The gap between shareholding and ability to appoint directors by the different investor categories varies across the provinces. We will return to this issue later on.

The situation differs across the three provinces. Shareholding by the local government, by households and by Chinese institutional investors is relatively more homogeneous. On their part, SOEs exert the leading (a noticeable) role in Hubei (Sichuan), as opposed to their negligible shareholding in Zhejiang (Table 5). Finally, on the contrary, private firm shareholding is negligible in Hubei, intermediate in Sichuan and largest in Zhejiang. In terms of their ability to appoint CCB board directors, private firms and households (SOEs) have a smaller (larger) say – with respect to their shareholding – in each province. Contrary to the situation prevailing in Zhejiang, the local government plays a bigger role – than its shareholding – in both Hubei and Sichuan. By contrast, Chinese institutional investors' contribution to the appointment of directors is larger than their shareholding in Zhejiang while it is smaller in Sichuan and, even more so, in Hubei.

The large role exerted by SOEs in appointing CCB directors brings back the issue of political interference that we highlighted in Section 2. To be sure, as we have seen, the share of SOE appointees is lowest in the most affluent province and highest in the province experiencing the slowest growth.

Finally, the survey tells us the shares of loans each CCB grants to: large enterprises (with more than 500 employees); medium-sized enterprises (with employees between 100 and 500); small-sized enterprises (with less than 100 employees). On average, these shares are 22.7, 34.8 and 42.4%. The share of loans going to large enterprises is much (somewhat) larger in Hubei (Zhejiang), while those granted to medium and small-sized enterprises are larger in Sichuan.

We may now try to test whether the differences in terms of corporate governance affect CCB performance. In particular, we want to investigate the potential role for allocative distortions and inefficiency which might derive from a large role exerted by SOEs in appointing CCB board directors. Indeed, should CCBs be captured by – often unprofitable – SOEs, this might negatively impinge on their performance.

We run some econometric specifications on this issue. In view of the limited number of observations, we use a parsimonious specification and use the interaction expansion to build two province dummies (identifying any specific effect for Hubei and Zhejiang, respectively the province with intermediate and highest level of development). Beside CCB size (SIZE), our specifications include the share of board directors appointed by SOEs (SOEDIR), to capture political interference. In addition, in the NPL regression, we introduce two basic controls for loan specialization: the share of loans granted to – possibly lower risk – large-sized enterprises (LELOSH) and that to – possibly higher risk – medium-sized enterprises (MELOSH). Finally, the NPL ratio is included among the explanatory variables of the ROA and ROE regressions.

The results are reported in Table 6. Bank size is confirmed an important determinant of all the three measures of performance (panels 6A, 6B, 6C). The regression in panel 6A, confirms also that, with respect to CCBs in Hubei and Sichuan, the NPL ratio is systematically lower for those in Zhejiang. In addition, while the shares of loans granted to medium-sized enterprises and that to large-sized enterprises are not significant, what is more interesting to us, the NPL ratio is positively affected by the share of CCB board directors appointed by SOEs. This result is consistent with the hypothesis that a large presence of SOE appointees among directors brings in the CCBs political interference worsening their loan allocation ability. The ROA and ROE regressions (Specification 1 in Panels 6B, 6C) corroborate our expectation that larger NPL ratios negatively impinge on profitability. Indeed, the Zhejiang province dummy is no longer significant after we include NPL among the explanatory variables of ROA and ROE.

Furthermore, a larger SOEDIR worsens ROA and ROE – even after controlling for the NPL ratio – suggesting that the political interference possibly affects CCB efficiency at large. Finally, if we remove the NPL ratio and leave only our political interference variable (SOEDIR), both ROA and ROE are still significantly better in Zhejiang with respect to Hubei and Sichuan (Specification 2 in Panels 6B, 6C). This seems to imply that both geography and political interference matter.

The hypothesis that captive CCBs are potentially endangered by SOE interference may also explain why performance is relatively poor in Hubei province with respect to what one might expect from its level of development indicated by a GDP per capita on par with the national average.

In addition, it is interesting to address also the role played by directors appointed by the local government.<sup>8</sup> In this respect, we may hold two alternative views. On one hand, a larger share of directors appointed by the local government might imply that the government is more forwarding to support the local CCB – e.g., through NPL relief and/or recapitalization. On the other hand, the political interference mechanism described above for SOEDIR might be reinforced by a large share of government appointed directors. To check whether these views are supported by the data, we augmented the previous specifications by including also the share of directors appointed by the local government (GOVDIR). Table 7 presents the results. The only noticeable difference with respect to the results in Table 6 pertains to the NPL regression. Here, it seems that a larger share of directors appointed by the local government associates with lower NPL ratios, possibly reflecting the fact that when the government is more involved it may more likely help endangered CCBs to get rid of (some of their) NPLs. This appears as the more sensible interpretation since, on the contrary, we fail to detect any positive effect of GOVDIR on either ROA or ROE.

Before turning to the conclusions, it is worthwhile trying to go a little deeper on the channels through which geography affects performance.<sup>9</sup> We have seen that ROA and ROE performance of Zhejiang CCBs is systematically better only if we remove the NPL ratio from the list of explanatory variables (Specification 2 in Panels 6B and 6C of Table 6). From the results in Panel 6A, we learn that, controlling for the other variables, Zhejiang CCBs have an NPL ratio 13.3 percentage points lower than the rest of the CCBs in the sample. At the same time, we observe that, on average, SOEDIR is 10.7% in Zhejiang, much lower than the 34.3% detected for the CCBs in Hubei and Sichuan. Let's now focus on ROA: in the 2003 average, this indicator stands at 0.79% for Zhejiang CCBs vis-à-vis 0.19% for the other CCBs. According to the results in Panel 6B, a 1 percentage point drop in the NPL ratio associates with an improvement of 0.027 percentage points in ROA, while a 1 percentage point less SOEDIR goes together with an increase of 0.0047 percentage points in ROA. Thus, the 13.3 percentage points lower NPL ratio seems to account for almost 60% of the gap in terms of ROA between Zhejiang and the other two provinces,<sup>10</sup> while the difference in SOEDIR appears to explain an additional 19% of the ROA gap.

<sup>8</sup> I am grateful to one of the referees for suggesting to add this part of the analysis.

<sup>9</sup> We will do that referring to the estimates in Table 6 but the results would not change by using those in Table 7.

<sup>10</sup> One may ask how much of the lower NPL ratio in Zhejiang is accounted for by having received fewer NPLs as inheritance from Urban Credit Cooperatives (see above, Section 3.1). A simple calculation is useful here. The average NPL ratio for Zhejiang CCBs in 2000 stood at 18.9%. If these CCBs had kept those NPLs in their books up to 2003 without making new NPLs, their NPL ratio would have dropped to 7.3% just because their loans grew by a factor 2.6 between 2000 and 2003. However, the actual NPL ratio for Zhejiang CCBs in 2003 was 5.0%. This seems to imply that the ability to avoid NPLs is systematically higher for Zhejiang CCBs. Once more, this hardly depends on credit management only but descends also from doing business in a more developed – and less risky – environment.

Thus, it seems that, keeping corporate governance (relatively) constant, geography is an important determinant of performance. Accordingly, the view that the New Tigers are the solution to bring better banking to China seems too simplistic. To be sure, we have remarked that corporate governance differs even within CCBs, where those CCBs more exposed to the interference of – often unprofitable – SOEs are worse performers. It is possible that higher development induces better governance by decreasing the role of SOEs. However, this implies that corporate governance is to some extent endogenous and, in any event, what works in China's affluent Eastern Belt may not work in the less developed areas. This casts doubt on the possibility that the New Tigers may offer an effective national solution to deal with the country's banking problem and, as a result, forces policy makers to turn again to pursue improving SOCBs.

## 4. Conclusions

We have delved into the banking system's manifest problems, which possibly put the continuation of the Chinese economic miracle at risk. We have argued that the weakness of the banking system in a country that has recorded average annual growth of around 9% over 25 years is only an apparent puzzle, and that the crux of the banking problem lies in the unhealthy link between loss-making state-owned enterprises and state-owned commercial banks, the "Old Mammoths" that still dominate banking in China. We have posited that this link did not materialize by chance but, rather, was the negative side of the policy choice for gradual transition, which left unprofitable state-owned enterprises in business while, due to political interference, state-owned commercial banks could not stop lending to them and, later, had to bear the losses created by their inefficient operations.

Next, we have discussed how to bring better banking to China. In particular, we asked whether the emergence of a new breed of dynamic banks (the "New Tigers"; banks formed as companies limited by shares, including city commercial banks) can be the answer. We have provided details on the growth of the New Tigers, comparing their performance with that of the Old Mammoths. We have considered whether the New Tigers offer China an option of "growing out" of its banking problem. Although extrapolating the New Tigers' growth might suggest that they are rapidly supplanting the Old Mammoths, we posited that an accurate answer requires carefully evaluating the sources of the New Tigers' better performance. Specifically, we need to understand whether this is simply caused by better corporate governance or whether – and to what extent – the New Tigers are better simply because they do business in the most developed area of the country. To address this, we drew on the results of a field survey to check whether the performance of the New Tigers differs according to the level of development of their area of operation. This was precisely the rationale behind looking at city commercial banks, a vibrant segment within the New Tigers, which include banks operating throughout the whole of the country.

By focusing on 20 city commercial banks located in three provinces with differing levels of development, we kept corporate governance (relatively) constant and could thus ascribe any significant difference in performance across provinces to their relative underlying prosperity. The results show that these banks' performance was systematically and positively related to the level of economic prosperity in their provinces.

The main result of our econometric analysis implies that the New Tigers may be unable by themselves to bring better banking to the whole of the country. This suggests that the authorities are right to stress the need to restructure and rehabilitate the Old Mammoths. While the authorities' push to transform the state-owned commercial banks into companies limited by shares goes in the right direction, it is not clear that stock-exchange listing can really, per se, improve these banks' corporate governance. Given their size and considering that the government could continue to be the largest shareholder, doubts are legitimate. Perhaps, as suggested by Huang (2002), it would be advisable for China's authorities to consider breaking up their Old Mammoths. Together with stock-exchange listing, this would help streamline the Old Mammoths and could also facilitate the introduction of foreign strategic investors, thus contributing to improve their governance.

## References

- Black, B. and A.S. Tarassova (2003), "Institutional Reform in Transition: A Case Study of Russia," *Supreme Court Economic Review*, 10: 211-78.
- Brandt, L. and H. Li (2003), "Bank Discrimination in Transition Economies: Ideology, Information, or Incentives?" *Journal of Comparative Economics*, 31: 387-413.
- Chang, C. (2003), "Progress and Peril in China's Modern Economy," Federal Reserve Bank of Minneapolis, *The Region*, 17(4): 26-30.
- Claessens, S. (1998), "Banking Reform in Transition Countries," *Journal of Policy Reform*, 2(2): 115-33.
- Cull, R. and L.C. Xu (2000), "Bureaucrats, State Banks, and the Efficiency of Credit Allocation: The Experience of Chinese State-owned Enterprises," *Journal of Comparative Economics*, 28: 1-31.
- Cull, R. and L.C. Xu (2003), "Who gets credit? The Behavior of Bureaucrats and State Banks in Allocating Credit to Chinese State-owned Enterprises," *Journal of Development Economics*, 71: 533-59.
- Dutta, M. (2005), "China's Industrial Revolution: Challenges for a Macroeconomic Agenda," *Journal of Asian Economics*, 15: 1169-202.
- Ferri, G. (2003), "Corporate Governance in Banking and Economic Performance - Future Options for PRC," Asian Development Bank Institute Discussion Paper No.3, August. Available at [www.adbi.org](http://www.adbi.org)
- Ferri, G. (2005), "Banking in the People's Republic of China: Are New Tigers Supplanting Old Mammoths?" Asian Development Bank Institute Discussion Paper No.35, September. Available at [www.adbi.org](http://www.adbi.org)
- Girardin, E. and Ping, X. (1997), "Urban Credit Co-operation in China," OECD Technical Paper No.125.
- Huang, Y. (2002), "Is Meltdown of the Chinese Banks Inevitable?" *China Economic Review*, 13: 382-87.
- La Porta, R., F. López-de-Silanes and A. Shleifer (2002), "Government Ownership of Banks," *Journal of Finance*, 57: 265-301.
- Lau, L. J., Y. Qian and G. Roland (2000), "Reform without Losers: An Interpretation of China's Dual-Track Approach to Transition," *Journal of Political Economy*, 108(1): 120-43.
- Liu, Li-Gang (2002), "Dead End Ahead for China's Dual Track Approach to Further Economic Transition," ADB Institute, mimeo.
- OECD (2005), *Economic Surveys: China*, OECD, Paris.
- Moreno, R. (2002), "Reforming China's Banking System," *FRBSF Economic Letter*, No. 2002-17, May 31.

- Opper, S. (2001), "Dual-Track Ownership Reforms: Lessons from Structural Change in China, 1978-1997," *Post Communist Economies*, 13(2): 205-27.
- Park, A. and K. Sehart (2001), "Tests of Financial Intermediation and Banking Reform in China," *Journal of Comparative Economics*, 29: 608-44.
- Stiglitz, J.E. (2002), *Globalization and Its Discontents*, New York – London: W.W. Norton & Company.
- Wei, S.J. and T. Wang (1997), "The Siamese Twins: Do State-owned Banks Favor State-owned Enterprises in China?" *China Economic Review*, 8(1): 19-29.
- Zhou, X. (2004), Some Issues Concerning the Reform of the State-owned Commercial Banks, Speech by the Governor of the People's Bank of China, at the IIF Spring Membership Conference, Shanghai, 16 April.



Table 1. Total Assets, ROA and ROE: SOCBs vs. New Tigers and CCBs

Year	Growth rate %			ROA %			ROE %			Market Share %	
	SOCBs	New Tigers	CCBs	SOCBs	New Tigers	CCBs	SOCBs	New Tigers	CCBs	New Tigers	CCBs
1998	16.3	12.6	19.2	0.096	0.807	1.673	2.211	7.949	5.948	12.8	1.9
1999	9.4	20.2	22.2	0.126	0.585	1.010	2.450	7.964	6.846	14.1	2.2
2000	11.3	28.4	29.7	0.182	0.542	0.815	3.639	8.583	6.133	15.7	2.5
2001	6.9	25.2	33.5	0.164	0.644	0.594	3.202	11.259	7.029	18.7	2.8
2002	11.1	29.1	39.5	0.182	0.547	0.464	3.682	9.003	7.037	21.5	3.0
2003	12.1	27.7	19.0	0.077	0.480	0.335	1.583	8.171	9.146	22.1	3.1
2004	6.8	19.4	13.5	0.662	0.554	0.313	7.452	11.463	6.342	23.8	3.2
2005	19.4	17.9	13.2	0.621	0.729	0.445	-2.071	13.949	6.922	23.9	3.3
Average	-	-	-	0.264	0.611	0.706	2.769	9.793	6.925	-	-

Source: Our computations on data for total assets derived from Bankscope.

Table 2. Basic Information on the Three Provinces (2003)

Province	Population (million)	Economic Growth Rate (%)	Area (10 thousand km)	GDP Per Capita (CNY/person)	CCBs surveyed in the province (year of establishment)
Zhejiang	46.13	14.0	10.2	19,944	<b>7 CCBs:</b> Hangzhou (1996); HuZhou, JiaXing, JinHua, ShaoXing (1997); Wenzhou (1998); Taizhou (2002).
Hubei	59.75	9.3	18.6	9,031	<b>5 CCBs:</b> Huangshi, Jingzhou, Wuhan (1997); Yichang (1998); Xiaogan (1999).
Sichuan	86.40	11.8	48.5	6,315	<b>8 CCBs:</b> ChengDu (1996); LeShan, LuZhou, PanZhihua (1997); Deyang (1998); Mianyang (2000); Nanchong, Zigong (2001).
<b>Total</b>	192.28	-	77.3	-	<b>20 CCBs:</b> 2 (1996); 10 (1997); 3 (1998); 1 (1999); 1 (2000); 2 (2001); 1 (2002).
<b>Memorandum: China</b>	1,276.27	9.1	960	9,143	<b>112 CCBs</b>

**Table 3. Basic Features of the 20 CCBs by Province: Mean & (Median) 2000-2003<sup>(a)</sup>**

Province	Total assets (million CNY)	Asset growth 2000-2003 (%) (b)	ROA (%)	ROE (%)	NPL (%)	Asset/No. of Employees	No. of Employees/ No. of branches	Cost/Income	Capital Adequacy (2003)	M&A (Yes=1; No=0)
Zhejiang	9025 (5528)	141.0	0.77 (0.38)	12.73 (9.15)	11.62 (9.40)	10.06 (8.46)	10.06 (8.46)	0.90 (0.93)	5.6 (6.0)	0.29 (0.00)
Hubei	4638 (1832)	58.3	-0.52 (-0.46)	-4.12 (-5.30)	40.81 (38.71)	5.25 (4.78)	5.25 (4.78)	0.93 (0.97)	4.0 (4.0)	0.00 (0.00)
Sichuan	4191 (1807)	72.9	0.06 (0.23)	0.66 (2.00)	28.05 (26.54)	5.99 (5.59)	5.99 (5.59)	0.78 (0.87)	11.3 (11.0)	0.25 (0.00)
Total	6010 (2639)	101.1	0.19 (0.27)	4.05 (4.10)	26.37 (23.33)	7.22 (5.97)	16.2 (15.9)	0.87 (0.91)	8.1 (6.5)	0.20 (0.00)

(a) Source: computations based on the survey data.

(b) Asset growth 2000-2003 refers to the 16 CCBs – 6 in Zhejiang, 5 in Hubei, 5 in Sichuan – active in both the initial and the final year.

**Table 4. Regression on CCBs' Performance**

We estimate three equations where various measures of performance are taken as the dependent variable and are regressed against bank size and two provincial dummy variables. The equations have the following form:

$$\text{PERFORMANCE} = \alpha_1 + \alpha_2\text{SIZE} + \alpha_3\text{LPCGDP} + \alpha_4\text{DUZHE}$$

As the dependent variable we consider alternatively ROA, ROE, NPL. Among the explanatory variables we consider: the total assets of the CCB (SIZE in billions CNY); the log of per capita GDP (LPCGDP) in the province; a dummy variable taking value 1 for the CCBs located in Zhejiang and zero otherwise (DUZHE). Reported t-statistics are obtained via OLS and are Huber-White heteroskedastic consistent. In addition, as a robustness check we also bootstrapped (with 500 replications) the standard errors. Estimates were conducted by means of the Stata 9.1 package. The superscripts \*\*\*, \*\* and \* indicate that the coefficient is different from zero respectively at the 1%, 5% and 10% confidence level.

## PANEL 4A - NPL

Dependent Variable: NPL	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
SIZE	-0.1999	-1.45	-1.26	-0.1788	-1.40	-1.31
LPCGDP	-16.8783	-4.88***	-4.93***	-6.8891	-0.85	-0.87
ZHEJIANG	--	--	--	-13.5147	-1.73*	1.67*
CONSTANT	178.6059	5.48***	5.54***	93.3278	1.32	1.35
No. obs.	71	71	71	71	71	71
F (2,68)	12.29***	---	---	F (3,67) 16.68***	---	---
Wald (2)	---	---	24.95***	---	Wald(3)	49.55***
R2	0.243	---	---	0.269	---	---
R2 adjust	---	---	0.221	---	---	0.236

## PANEL 4B - ROA

Dependent Variable: NPL	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
SIZE	0.0657	5.15***	4.83***	0.0670	6.06***	5.14***
LPCGDP	0.3686	2.34**	2.44**	-0.5118	-1.39	-1.34
ZHEJIANG	--	--	--	1.1470	3.15***	3.08***
CONSTANT	-3.5365	-2.40**	-2.51**	3.9445	1.23	1.19
No. obs.	70	70	70	70	70	70
F (2,67)	17.08***	---	---	F (3,66) 17.89***	---	---
Wald (2)	---	---	30.28***	---	Wald(3)	44.62***
R2	0.408	---	---	0.485	---	---
R2 adjust	---	---	0.390	---	---	0.462

## PANEL 4C - ROE

Dependent Variable: NPL	Specification 1			Specification 2		
	Basic results		Bootstrap results	Basic results		Bootstrap results
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
SIZE	0.8166	5.99***	5.08***	0.8343	6.87***	5.65***
LPCGDP	6.7738	3.26**	3.21***	-4.6968	-0.97	-0.98
ZHEJIANG	--	--	--	14.9443	3.19***	3.24***
CONSTANT	-61.9943	-3.22***	-3.19***	35.4727	0.85	0.86
No. obs.	70		70	70		70
F (2,67)	26.14***		---	F (3,66) 27.37***		---
Wald (2)	---		41.71***	---		Wald(3) 66.72***
R2	0.450		---	0.527		---
R2 adjust	---		0.434	---		0.506

Table 5. Governance and Loan Allocation by Province: Mean & (Median) 2003<sup>(a)</sup>

Province	Shareholding (%) by:					Directors (%) appointed by:					Loan (%) to:		
	Governm.	SOEs	Private firms	Househ. firms	Inst. Invest	Governm.	SOEs	Private firms	Househ. firms	Inst. Invest	Large firms	Medium firms	Small firms
Zhejiang	23.4	3.3	22.5	10.5	36.0	19.7	10.7	17.5	4.8	47.4	27.1	34.0	38.9
	(30.0)	(0.0)	(0.0)	(10.1)	(37.6)	(14.3)	(0.0)	(0.0)	(0.0)	(75.0)	(22.7)	(27.1)	(32.5)
Hubei	29.9	32.7	2.8	6.9	28.7	37.5	47.5	0.0	0.0	15.0	35.2	26.7	38.1
	(27.4)	(48.6)	(0.0)	(6.7)	(0.0)	(33.3)	(66.7)	(0.0)	(0.0)	(0.0)	(22.4)	(25.9)	(50.0)
Sichuan	21.9	21.1	13.3	8.0	35.7	31.0	26.1	4.5	5.7	32.7	10.1	41.4	48.5
	(21.2)	(10.7)	(0.0)	(5.1)	(44.1)	(18.8)	(20.8)	(0.0)	(0.0)	(16.7)	(0.0)	(45.9)	(48.3)
Total	24.2	17.7	13.9	8.6	34.0	28.7	26.1	7.9	4.0	33.4	22.7	34.8	42.4
	(24.1)	(0.3)	(0.0)	(6.3)	(36.2)	(20.0)	(0.0)	(0.0)	(0.0)	(0.0)	(14.7)	(27.8)	(41.4)

(a) Source: computations based on the survey data.

**Table 6. Regression on the Impact of SOE Shareholding on CCBs' Performance**

We estimate three equations where various measures of performance are taken as the dependent variable and are regressed against the extent of shareholding by SOEs and, in some cases, other explanatory variables. The three equations have the following forms:

$$\text{NPL} = \alpha_1 + \alpha_2 \text{SIZE} + \alpha_3 \text{SOEDIR} + \alpha_4 \text{LELOSH} + \alpha_5 \text{MELOSH} + \alpha_6 \text{DUZHE}$$

$$\text{ROA} = \alpha_1 + \alpha_2 \text{NPL} + \alpha_3 \text{SIZE} + \alpha_4 \text{SOEDIR} + \alpha_5 \text{DUZHE}$$

$$\text{ROE} = \alpha_1 + \alpha_2 \text{NPL} + \alpha_3 \text{SIZE} + \alpha_4 \text{SOEDIR} + \alpha_5 \text{DUZHE}$$

The explanatory variables are defined as follows: the total assets of the CCB (SIZE in billions CNY); the share of CCB board directors appointed by SOEs (SOEDIR); the share of loans granted to large enterprises (LELOSH in %) and that granted to medium-sized enterprises (MELOSH in %); a province dummy controlling for CCBs operating in the Easternmost (and most developed) province of Zhejiang. Reported t-statistics are obtained via OLS and are Huber-White heteroskedastic consistent. In addition, as a robustness check we also bootstrapped (with 500 replications) the standard errors. Estimates were conducted by means of the Stata 9.1 package. The superscripts \*\*\*, \*\* and \* indicate that the coefficient is different from zero respectively at the 1%, 5% and 10% confidence level.

## PANEL 6A - NPL

Dependent Variable: NPL	Basic results		Bootstrapped results
	Coefficient	t-stat	z-stat
SIZE	-0.4815	-2.17**	-1.87*
SOEDIR	17.0633	2.47**	2.33**
LELOSH	-0.1416	-0.82	-0.79
MELOSH	0.0536	0.63	0.60
ZHEJIANG	-13.2906	-2.90***	-2.85***
CONSTANT	29.4154	6.73***	6.55***
No. obs.		71	71
F (5,65)		14.76***	---
Wald (5)		---	59.86***
R2		0.316	---
R2 adjust		---	0.264

## PANEL 6B - ROA

Dependent Variable: ROA	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
NPL	-0.0269	-7.93***	-7.68***	---	---	---
SIZE	0.0617	6.10***	5.14***	0.0719	7.68***	6.23***
SOEDIR	-0.4717	-2.63**	-2.46**	-0.8151	-3.59***	-3.41***
ZHEJIANG	-0.0858	-0.64	-0.63	0.3939	3.01***	3.05***
CONSTANT	0.6599	5.70***	5.25***	-0.1800	-1.38	-1.40
No. obs.		67	67		70	70
F (4,62)	39.13***		---	F (3,66)	22.01***	---
Wald (4)	---		124.56***	---	Wald(3)	48.62***
R2	0.748		---	0.530		---
R2 adjust	---		0.732	---		0.509

## PANEL 6C - ROE

Dependent Variable: ROE	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
SIZE	-0.1999	-1.45	-1.26	-0.1788	-1.40	-1.31
NPL	-0.3027	-6.27***	-6.20***	---	---	---
SIZE	0.7761	6.50***	5.37***	0.9026	7.79***	6.67***
SOEDIR	-5.9904	-2.35**	-2.22**	-9.7897	-3.41***	-3.28***
ZHEJIANG	2.2573	1.18	1.19	7.3256	5.13***	4.87***
CONSTANT	7.8988	4.70***	4.66***	-1.6q44	-1.20	-1.11
No. obs.		67	67		70	70
F (4,62)	38.56***		---	F (3,66)	30.96***	---
Wald (4)	---		143.27***	---	Wald(3)	71.72***
R2	0.734		---	0.572		---
R2 adjust	---		0.717	---		0.552

**Table 7. Regression on the Impact of SOE & GOV Shareholding on CCBs' Performance**

We estimate three equations where various measures of performance are taken as the dependent variable and are regressed against the extent of shareholding by SOEs and, in some cases, other explanatory variables. The three equations have the following forms:

$$NPL = \alpha_1 + \alpha_2 \text{SIZE} + \alpha_3 \text{SOEDIR} + \alpha_4 \text{GOVDIR} + \alpha_5 \text{LELOSH} + \alpha_6 \text{MELOSH} + \alpha_7 \text{DUZHE}$$

$$ROA = \alpha_1 + \alpha_2 \text{NPL} + \alpha_3 \text{SIZE} + \alpha_4 \text{SOEDIR} + \alpha_5 \text{GOVDIR} + \alpha_6 \text{DUZHE}$$

$$ROE = \alpha_1 + \alpha_2 \text{NPL} + \alpha_3 \text{SIZE} + \alpha_4 \text{SOEDIR} + \alpha_5 \text{GOVDIR} + \alpha_6 \text{DUZHE}$$

The explanatory variables are defined as follows: the total assets of the CCB (SIZE in billions CNY); the share of CCB board directors appointed by SOEs (SOEDIR); the share of CCB board directors appointed by the local government (GOVDIR); the share of loans granted to large enterprises (LELOSH in %) and that granted to medium-sized enterprises (MELOSH in %); a province dummy controlling for CCBs operating in the Easternmost (and most developed) province of Zhejiang. Reported t-statistics are obtained via OLS and are Huber-White heteroskedastic consistent. In addition, as a robustness check we also bootstrapped (with 500 replications) the standard errors. Estimates were conducted by means of the Stata 9.1 package. The superscripts \*\*\*, \*\* and \* indicate that the coefficient is different from zero respectively at the 1%, 5% and 10% confidence level.

## PANEL 7A - NPL

Dependent Variable: NPL	Basic results		Bootstrapped results
	Coefficient	t-stat	z-stat
SIZE	-0.5967	-2.56**	-1.95*
SOEDIR	14.5911	2.03**	1.86*
GOVDIR	-17.6205	-3.03***	-2.67***
LELOSH	-0.2068	-1.18	-1.06
MELOSH	0.1050	1.14	0.89
ZHEJIANG	-14.6835	-2.87***	-2.61***
CONSTANT	36.3696	7.19***	7.27***
No. obs.		71	71
F (6,64)		11.71***	---
Wald (6)		---	48.14***
R2		0.362	---
R2 adjust		---	0.302

## PANEL 7B - ROA

Dependent Variable: ROA	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
NPL	-0.0276	-7.98***	-7.70***	---	---	---
SIZE	0.0606	6.00***	5.08***	0.0721	7.52***	6.15***
SOEDIR	-0.4884	-2.69***	-2.56**	-0.8035	-3.45***	-3.28***
GOVDIR	-0.2832	-1.48	-1.36	0.1371	0.49	0.40
ZHEJIANG	-0.1172	-0.89	-0.87	0.4064	3.10***	3.17***
CONSTANT	0.7711	5.48***	5.31***	-0.2233	-1.43	-1.41
No. obs.		67	67		70	70
F (5,61)		30.99***	---		F (4,65) 16.20***	---
Wald (5)		---	125.92***		---	Wald(4) 49.73***
R2		0.752	---		0.531	---
R2 adjust		---	0.732		---	0.502

## PANEL 7C - ROE

Dependent Variable: ROE	Specification 1			Specification 2		
	Basic results	Bootstrap results		Basic results	Bootstrap results	
	Coeff.	t-stat	z-stat	Coeff.	t-stat	z-stat
NPL	-0.3142	-6.43***	-6.45***	---	---	---
SIZE	0.7575	6.41***	5.32***	0.9029	7.67***	6.63***
SOEDIR	-6.2861	-2.47**	-2.33**	-9.7756	-3.33***	-3.21***
GOVDIR	-4.9988	-1.80*	-1.47	0.1665	0.06	0.05
ZHEJIANG	1.7026	0.88	0.90	7.3407	5.31***	4.90***
CONSTANT	9.8614	4.71***	4.71***	-1.6670	-1.07	-0.96
No. obs.		67	67		70	70
F (5,61)		32.02***	---		F (4,65) 23.04***	---
Wald (5)		---	150.98***		---	Wald(4) 71.44***
R2		0.740	---		0.572	---
R2 adjust		---	0.719		---	0.545